THE ARCHITECT & BUILDING NEWS

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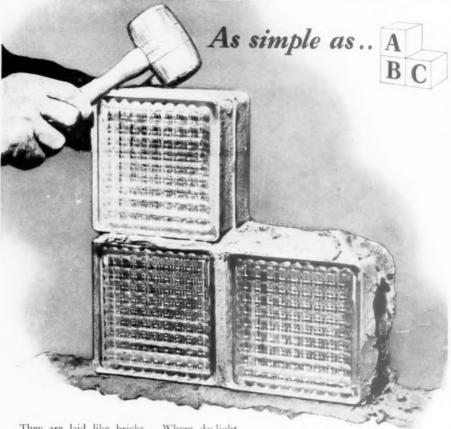
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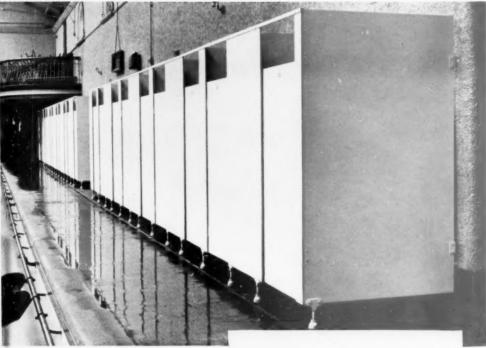
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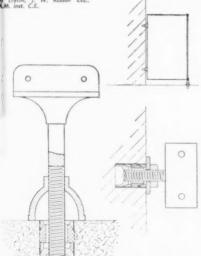
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The advertisement reproduced here is appearing in various Industrial Journals.

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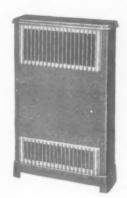








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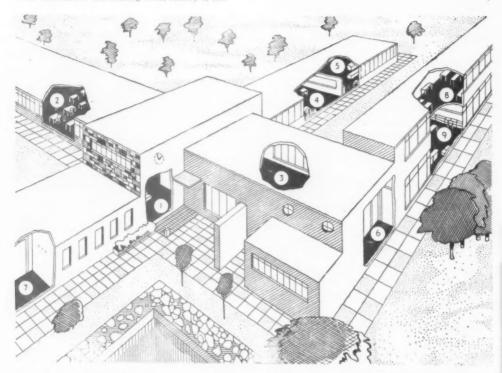
the flats must be labour-saving to meet the needs of future tenants, and so electricity is the best method of providing all the services required.

With electricity, one installation will provide all the services for a modern home - lighting, heating, cooking, refrigeration, hot water, cleaning, clothes washing, drying and ironing, and radio and television.

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THE BRITISH ELECTRICAL DEVELOPMENT ASSOCIATION, 2 SAVOY HILL, LONDON, W.C.2



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(The information panel has been prepared without prejudice to any special claim made by manufacturers of the materials listed.)

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5	KITCHENS	-		-	-	-	4000	-			
6	CORRIDORS		*				_		-		-
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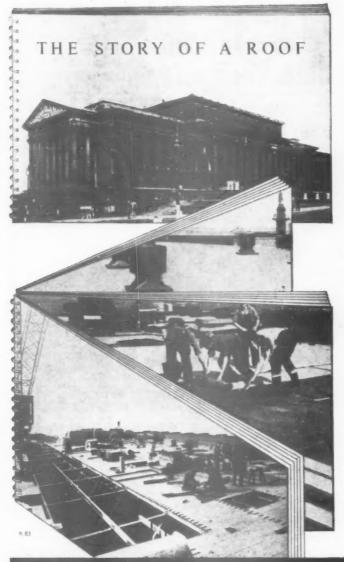
Fleetwood 'Duramel' for wood-work and iron-work,

and 'Duramatt' or 'Plastex' for walls and ceilings, have been specified in hospitals, schools, housing, clubs, factories, offices, etc., all over the

country. Architects and Trade Users are invited to utilise the services of the Fleetwood Architectural Service Department, entirely without obligation.



FLEETWOOD paint makes all the difference!



The erection of St. George's Hall, Liverpool, completed in 1854, fulfilled the dream of its 24-year-old Architect, Harvey Lonsdale Elmes, and provided future generations with a classic example of Greek architecture adapted to modern requirements.

It is perhaps fitting that the massive timber roof destroyed by fire in 1941 should have been replaced by one of steel fireproof construction and covered with Ruberoid Insulated Metal Roofing, the most effective of the modern roofing systems.

Details of the contract carried out at St. George's Hall, Liverpool, are contained in a special folder No. 554 available on application. Architects and Engineers are also invited to write for Catalogue No. 326 "Standard Specifications for Ruberoid Roofs."

Photographs are reproduced by the courtesy of Ronald Bradbury, Ph.D., F.R.I.B.A., A.M.T.P.I. City Architect, Liverpool Corporation.

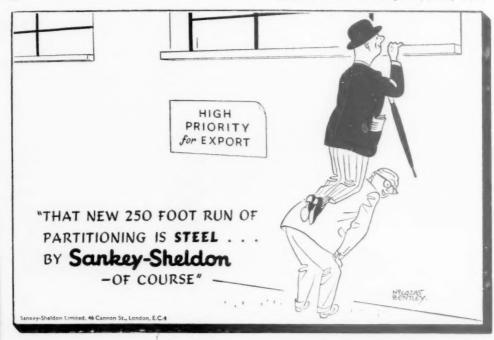
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93. COMMONWEALTH HOUSE

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The "Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual substription, inland and overseas, is £1 15s, 0d, post paid; U.S.A. and Canada 89,00 Published by ILIFFE & SONS LTD. DORSET HOUSE, STAMFORD STREET, LONDON, S.E.I Telegrams: "ARCHITONIA, SEDIST, LONDON,"

Branch Offices: Coventry: 8-10 Corporation Street; Birmingham: King Edward House, New Street; Monchester: 260 Deansgate, Tel. Blackfriars 4412 (3 lines), Deansgate 3595 (2 lines); Glosgow: 26B Renfield Street.

SNAKES AND LADDERS

NEW controls of zinc and copper and, therefore, of brass have been announced by the Minister of Supply. Practically all the non-ferrous metals used by industry are now under control or in short supply. Zinc has been stockpiled by governments and industry against the cold war and the active war in Kôrea and its non-availability, in anything like sufficient quantities to satisfy the double demands of peace and war in all sorts of industries, is added to by the partial failure of supplies to this country, especially from Belgium, the result of a world shortage against a world demand.

The control is, from the 1st of February, unlike the controls instituted through licences during the last war, to be imposed on the allocation of raw materials to users. The type of "end-use" is, therefore, left to each manufacturer, who knows that he will only get zinc at an average (over all grades) of about 60 per cent. of his previous intake.

The provisional list (which we suspect will be added to rather than shortened) of prohibited uses of zinc, copper and copper alloys (and presumably this means bronze), includes architectural and decorative metal of all kinds, galvanised sheet and hollow metal and wire, rolled zinc and the drastic curtailment of zinc oxide, used in paint manufacture. The control of copper now introduced is to prevent substitution of copper for zinc and brass where this might be possible. What is not clear is whether the "alloys of copper" mentioned include those of copper with tin; if so, as we have already said, bronze is out, too. Tin and lead are, in any case, in very short supply for very much the same reasons that pertain to zinc and copper.

We also understand that the control of the supply and price of scrap zinc, lead, copper and tin is under consideration by the Minister of Supply and that the Board of Trade is considering severely cutting the supplies of zinc and lead to the paint manufacturers.

What are likely to be the effects of all this on the building industry? Firstly, it must be deplored, even if it is considered inevitable, coming as it does when the various sides of the decorative metal and paint trades have more or less stabilized themselves after the recent war. Secondly, the further generalized point must be made that the controls will mean a reduction of quality and of ranges of materials and colours available to designers. The return of austerity standards means a loss of experience to designers and craftsmen and the frustration that follows means loss of inspiration and of quality, both in materials and design; that is the road, too, that means loss of architecture in its fullest sense.

Brass and probably bronze will vanish from consideration as finishings. Protective sprayings and dippings for certain types of components will stop and presumably paint—of lessened quality—will be substituted. And what of paint? Reduction in the use of zinc oxides means darker-coloured paints and so back to the Victorian chocolate-browns and mud colours. There would appear to be very little alternative, for lead, titanium and even chromium oxides are in short supply throughout the world.

The concentration of these non-ferrous metals on essentials and the rearmament programme may, on the other hand, stop a good deal of wasteful use of time and materials on the cheaper sorts of badly-designed "fancy" metal-work that litter the counters and windows of many shops and multiple stores.

The new controls will, of course, set up a search for substitutes; such reorientation, however much it may contribute to knowledge through original discovery, can only be regarded as an interruption of evolutionary progress—orderly development of quality and style. Aluminium will undoubtedly expand in use as the most common non-ferrous metal outside

control. That it could well do so has been obvious ever since the war ended, but it is a material that has limitations and metallurgical research has not yet provided the real answers to all the problems of the use of aluminium. In any case, extended use of this metal can only go on until the Air Ministry demands controls to cover extended programmes.

There remain plastics of all kinds. In some form or other this chemical development can be productive of the materials, decorative, structural, mechanical, of the future. But so far it has none too good a name either on the decorative side or in the realm of building components. Everything has at some time or another been imitated in a plastic, suitably or otherwise -- wood, metal, cloth, paper; photographed, engraved, transferred and embossed. It still remains an obsession with much of the plastic industry and its advisors that, having an entirely new material, it must not be seen except under a disguise, however indifferent or inappropriate - otherwise "the public would never accept the article" made from it.

Now it might conceivably be held that these cuts and controls of non-ferrous metals constitute a challenge to the makers and users of light alloys and plastics to extend themselves to meet new and enforced demands: to call in architects and industrial designers to assist them with advice; to increase production of the things people and buildings require and now find they are short of; in fact, to pick up the story from the point where the older metals have had to make their bow. We wonder if it will happen-or are we too idealistically minded?

Looking at it from the widest angle it must be concluded that the world is within sight-if it chooses to go on as it is now doing-not only of a shortage of mineral fuels (coal and oil) but of the non-ferrous metals that have existed, as concomitants to civilization, even before iron or its conversion into steel. The copper and bronze ages pass into the iron age and the latter into the steel age; if the obsession with atomic fission leaves room for any other sort of advancement, what is the next age-" aluminium" or "plastic"?

Abbreviated Ministry of Supply Provisional List of Prohibited Uses of : Zinc, Copper and or Copper Alloys, effective on February 1, 1951

ARCHITECTURAL AND DECORATIVE Barrel Bolts Catches
Chains (including sink and bath waste chains) Clips
Cornice Coverings
Damp Courses
Draught Excluders
Drawer Pulls
Expansion Joints
Fire Irons Rings Roofing Sheets except for essential Sash Lifts Fire Irons
Flashings
Floor Plates and Flooring Strip (e.g.
Duraxxo Strip)
Glazing Bars
Grills Sheathing generally Staples Stays
Step Treads
Steps (e.g. for counter edges)
Door Knockers Gutters and Rainwater Goods Handles

HOUSEHOLD APPLIANCES AND DOMESTIC UTENSILS
Ash Trays and other ash receptables Gongs Gongs Hardware and Hollow-ware generally Picture Wire Picture Wire
Port Scourers
Soap Dispensers
Soap Dispensers
Soap Sponge and Drinking Glass
Serviette Rings
Smoker Stand Rods and Fittings
Table Hollow-ware
Tea Strainers
Towel Raish
Towel Raish
Varies Paper Holders
Varies Coal Stuttles
Containers of Oil Lamps and Stoves Electroplate ware Fruit Dishes Fern Pots Fruit Dianes Fern Pots Fire guards and Sparkguards Fire Screens Fire Irons. Fire Dogs Fire Iron Boxes Coal and Log Boxes Funnels
Furniture Fittings, including handles
other than screws and hinges Vases Washstands

STATIONERS' SUNDRIES, ETC. Paper Fasteners
Drawing Pins
File Eyelets and other fittings
Screw Binders
Office Furniture and Stationers' Sun-

Transfer Cases
Deed Boxes
Stationery Cabinets
Metal Furniture
Penholders and Nibs Book-ends Blotters, Inkstands Paperweights Letter Racks and Trays

Bedsteads Window Fittings Curtain Rails

EMETAL WORK OF ALL KINDS

EXTERNAL:

Hangers

Hooks,

Knobs/other than for external use.

Linnings

Plaques places, chame, number and Plaques places, sicking places.

Rais and Railings

Rings

Rings

Rings

Rings

Routine Shoess excent for essential Conduit Bushes and Fittings for Civil GALVANIZED TUBES AND FITTINGS except for (ii) water services (ii) naval services (iii) refrigeration plant

(ii) Prinking water tanks and other naval services (iii) Prinking water tanks and other naval services (iii) Prinking water tanks and other naval services (iv) Fire fighting equipment

(iv) Fire fighting equipment.

FULLY GALVANIZED IRON AND STEEL WIRE except for

(i) Wire Ropes and Wire strand

(ii) Wire Netting for Summerfield Track

(iii) Sheep Netting

(iv) Electric Cables for submarine and subfluvial cables

(vi) Electric Cables for submarine and subfluvial cables

(vi) Cables for coal mines

(vii) Cables for coal mines

(viii) Cables where the armouring is left bare and bright

(viii) Cables where the armouring is left bare and WIPED GALVANIZED WIRE except for (i) Telephone, Telegraph Line and Earth wires (iii) Electric Cable (iii) Chain link fencing (iv) Patent steel fencing (v) Agricultural barb wire (vi) Fencing wire

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GENERAL GALVANIZING

Cinder Sieves
Coal Bunkers
Foot Scrapers
Gutters and Gutter Brackets
Lamp Shades
Scoops, Hods and Scuttles
Ventilators and Cowls except for use
on ships and in connection with
fume extraction
Confidding Scaffolding
Tubes and Fittings other than water
tubes
Conduit and Conduit Fittings

ROLLED ZINC ing sheets except for repairs Waterloos Cans (contractors', greenhouse, toilet or paint) Deep Jets Slop Pails Seed Hoppers Fire Buckets (if they are labelled sand)

Air Bricks
Door Plates and Frames
Gratings
Hat and Coat Hooks
Manhole Covers except for houses
Wire Guards for machinery, etc.,
except for use on ships or exposed to moisture and chemical actions ical action Wall ties and nails Roofing Sheets Tertiary lighting for Engine Rooms.

MEDICAL AND SCIENTIFIC APPARATUS
Bedpan Sterifisers and Racks

EVENTS AND COMMENTS

Ring out the Old—Ring in the New! Carved figures on St. Mary Redcliffe, Bristol.

DID YOU HAVE A GOOD CHRISTMAS ?

MONG the societies which I should like to help A form would be one for the suppression of people who, when one is at one's lowest ebb after public holidays in general and Christmas in particular, inquire automatically whether one had a Good Time. It always brings out the beast in me and I not only want to say that I had a simply grizzly time but I determine immediately to refrain from asking them whether they had a Good Time. This is in theory only, for in practice I always say that I have had a simply splendid time and hope they did too, etc. Anyway, what sort of a Christmas did you have? Mine could have scarcely been less architectural. My presents included seventeen handkerchiefs, three pairs of socks, a fascinating book on the love life of the spider, and in my stocking a packet of butter-scotch and an orange. There was nothing in fact to suggest that I prefer pitched roofs to flat, wrought iron to extruded plastic or goblins in the garden to Ganymeds in the living space. It is however not grown-ups' presents but children's which have the greatest effect on Christmas wellbeing. It is difficult to appreciate new socks or the sexual peculiarities of the spider when one is periodically deafened if not actually damaged by the discharge of multiple rocket projectors only slightly less lethal than those in current use among military men. Nor is it easy to devote the necessary concentration, never easy to muster at this period, for writing to Aunt Cissie to thank her for the alabaster pipe rack, when the air is continuously rent with cries of Maaaa-Maaaa from that new doll whose ingenious walking action makes nearly as much noise as the engines of the paddle steamer which plies from the pier at Bognor Regis.

The consumption of what I understand is usually known as Christmas Fare was adequate without being too excessive and I was pleased to note that on Boxing Day afternoon the lions and tigers at the Zoo looked much as if they had had their share of Christmas goodies too. Architecturally the Zoo is a most depressing place even on a fine day, but on a dark winter's afternoon when there is nothing to choose except the difference in temperature between the penguin pool and the reptile house the more sensitive would do well to avoid it.

All this now being over and my New Year's Resolutions having appeared last week it only remains for us all to look forward (I wonder) to the year which stretches before us—etc., etc.—and to hope that in retrospect it will be remembered as the Great Festival Year.

THE CLASS Z RESERVE AND YOU

IF, as has already been suggested in the Press, the Government decides to call up some of the Class Z reservists the crucial thing will be the age groups con-





Photo: J. Denson Robinso

cerned. It is very much to be hoped that those whose architectural training has already been delayed or interrupted will be given a break. Whatever happens there will be hard cases and as usual the loudest shouts will come from those least hurt.

ADDIS ABABA COMPETITION RESULT

T is announced that the competition for a new palace for the Emperor Haile Selassie has been won by two German architects, Herrn Hugo Brunner and Hermann Kiess of Stuttgart. That is all I know about it so far.

SMALL BOMBED SITES FOR HOUSING

THE L.C.C. has asked the Metropolitan Boroughs Standing Joint Committee for ideas for the use for housing purposes of the many small bombed sites in London. I suggest one-roomed flats for single office workers. This sort of accommodation has always been very scarce in London and even in the piping days very few private blocks of this type were built.

THE FUEL AND POWER CRISIS

T is difficult to find out just how serious the fuel and power shortage is. The Authorities do not make it easier. A reader tells me that Christmas week editions of a Southampton paper carried advertise-ments inserted by the local Electricity Board urging people to give electrical equipment as Christmas presents. In my home area we have for some time been having power cuts amounting sometimes to three hours in a week. At some expense and admittedly partly for my own convenience I scrapped an anthracite stove and installed one burning all solid fuels so that I could use coke and leave anthracite for export. Now, against my long outstanding coke order, the merchant has asked me to accept some anthracite instead. Friends in London have been told that they must wait at least a month for their very modest household supplies. Lord Citrine, head of the British Electrical Authority, warns everyone that vital materials are being diverted from power station construction and veryone at the top predicts power cuts for years, but nothing is done to attempt to limit the ever-increasing load. This tale of woe takes no account of Industry which is being seriously hampered by increasing power cuts. Speaking as Chairman of the Welsh Board of Industry recently, Sir Percy Thomas appealed to all users in Wales to reduce power consumption as much as possible at peak load hours. The Government hopes by this means to reduce the total load by as much as twenty per cent. This situation is very serious for industry but it is unlikely



Mr. Adrian Gilbert Scott who receives the C.B.E. in the New Year Honours.

to be brought home very forcibly to the general public when the shops are full of electrical appliances for sale without restriction.

THE BUILDING CENTRE TO MOVE

Thas been an open secret for some time that the Building Centre is to move-to-Store Street just north of Bedford Square. Readers may know the building which stands on the east corner of South Crescent. Designed at the beginning of the century by Taperell and Haase, it is believed to be one of the first reinforced concrete buildings to be built in London. It suits the Building Centre admirably with its unobstructed floors calculated for a superimposed load of 200 lbs. per foot super. Work on the conversion of the building started on the first of January and will it is hoped be completed by June Gontran Goulden, Deputy Director of the Building Centre, is the architect for the alterations. I understand that several of the sections of the new Centre will be considerably enlarged and that new sections will be opened. Furthermore there will be accommodation for temporary exhibitions and for lectures. The new building is considerably larger than the present one. Everyone who knows the building in Conduit Street will be pleased to hear that there is to be a passenger lift. The new position is ideal for architects and students, and for builders, and this, with its increased size, will no doubt make the Building Centre an even more important part of the building industry than it is already. A special New Year Greeting to the Building Centre.

I ZINC I TAW A PUDDY TAT . . .

THE restricted uses of zinc, and other metals, has produced the usual lists of articles which are said to be important to you and me and which will become scarce. The list for zinc includes some things the complete absence of which from the market for all time will cause me small loss—Fern Pots, Gongs, Jewel Boxes, Waffle Plates and Yule Log Boxes. 1

have heard of hewing the Yule Log, dragging it through the snow and even burning it but never of a box to put it in. Now, alas ! I may never see one.

NEW SCOTTISH BANKNOTES

COTLAND is in the news just now, and any SCOTLAND is in the news just now, and any reference to it must be made with care or someone is sure to be offended. It is a peculiarity of Scotland that its banks continue to issue their own highly individual notes. Anyone who had to take the first pay parade of an English unit in Scotland is unlikely to forget this fact. The design of banknotes is, I imagine, a specialised job, for many things must be incorporated, from the serial number to the water mark, all the time bearing in mind such technicalities as the confusion of forgers, the honour and standing of the Bank, and the absolute necessity of rendering the finished article impossible to confuse with notes to be other rules as well. There must be pictorial representation of industry, agriculture, a famous man or two, an allegorical figure or group, and, perhaps, even a famous beauty spot seen from the top of a convenient telegraph pole and framed with acanthus or other intricate embellishment. When you think of how little the current Bank of England pound note you could describe in any detail you may perhaps be forgiven for coming to the conclusion that the whole thing is done to baffle the gentleman who invariably lives in a back cellar, wears an eyeshade and unlike most of us in these hard days really makes money.

These remarks were provoked by black and white

pictures of a new Clydesdale and North of Scotland Bank pound note which includes a number of the features mentioned above. It was designed by Mr. G. W. Lennox Patterson, A.R.E. of the Glasgow School of Art, and is steel blue and warm brown.

PLUM CAKE FESTIVAL

NURSE Mary Cracknell, of St. Thomas's Hospital, made a Christmas cake for the patients in the form of a model of the South Bank exhibition. It is difficult, nay, impossible, to find a suitable comment for so ingenious and remarkable a piece of work but I have no doubt that Florence Nightingale would have had something to say.

HELP FOR STUDENTS

THE Institute of Registered Architects has decided to set up an Advisory Source Co. to set up an Advisory Service for Students. This service will be mainly designed to help students in



One of the table-mats in the clubroom of the Institute of Contemporary Art recently opened.

provincial towns who find it difficult to get the advice of practising architects and specialists during their The Council of the Institute is anxious for it to be known that its Students' Service is neither a Students' Union, a teaching organisation nor an examining body. Students who subscribe to the Service will be entitled to take part in the Institute's library service.

This seems to me to be a very good idea as the needs and problems of students working on their own in the smaller towns outside London are not sufficiently appreciated by those fortunate enough to have been trained in the big schools. Full particulars may be obtained from The Secretary, 47 Victoria Street,

London, S.W.1.

DEVON AND CORNWALL ARCHITECTURAL SOCIETY

NEW branch of this society was formed at Truro in November and has now produced a year-book for the use of its 66 members. contains much useful information and includes the names and addresses of public authorities in the district with a list of dates for the submission of drawings to local authorities in Cornwall. It has been well supported by local advertisers and the foreword points out that since the book is circulated free to all members it provides a service of value to the building industry in the Truro district. Of particular interest to people outside Cornwall is a list of buildings of architectural interest in the county.

FIREBIRD

READERS will be as pleased as I am to hear that Eric Bird has been made an M.B.E. in the New Year's Honours. Bird was Assistant Editor of the A. & B.N. from 1930 until he was appointed Editor of the R.I.B.A. Journal in November 1933. Under his editorship the R.I.B.A. Journal has come to be not only respected as one of the leading architectural papers in the world but actually read as well, and that, in these days, is saying something. This however is not the only string to Mr. Bird's lute. He is an acknowledged expert on fires and an accomplished performer on the push-bike. His book, Fires in Buildings, written with Mr. Stanley J. Docking, was published about a year ago and praised on this page. He has so far, I think, published nothing on bicycling. Well done, sir !

ABNER



On December 28, Sir Patrick Duff, Chairman of the National Parks Commission, signed the first Designation Order, that for the Peak District. The sketch shows the provisional map circulated to the local authorities interested, namely four C.C.s, one County Borough Council, one Municipal Borough, ten U.D.C.s and ten R.D.C.s, whose boundaries are shown dotted, while the proposed Park is shaded. The National Park will not come into existence officially until the Minister of T. & C.P. decides on the final boundary.

The Editor wishes to thank all those friends and readers who sent him Christmas Cards this year.

E W 0 F T HE W E E K

New Year Honours

KNIGHT BACHELOR

Alderman Richard Coppock, C.B.E., General HON.A.R.I.B.A.. National Federation of Building Trades Operatives.

Arthur Campbell Martin, F.R.I.B.A.

Oscar Faber, O.B.E., D.C.L., D.SC., M.I.C.E., Senor Partner, Oscar Faber & Partners. For services in the rebuilding of the House of Commons.
D. E. E. Gibson, A.R.I.B.A., City

Architect and Town Planning Officer,

P. B. James, Art D. Council of Great Britain. Art Director, Arts

John C. Jones, M.I.MECH.E., Director of Education, The Polytechnic, Regent Street, London.

J. W. Laing, Governing Director, John Laing & Son Ltd., Mill Hill.

William A. Ross, O.B.E., F.R.L.B.A., Director of Works and Services, Scot-land, Ministry of Works.

A. Gilbert Scott, M.C., F.R.I.B.A., For services in rebuilding the House of Commons.

Charles Greenwood, M.I.C.E., L.R.I.B.A., City Engineer and Surveyor, Chester.

A. E. Havinden, for services rendered to industrial design.

W. D. Lockhart, lately Senior In-

spector, Ministry of Town and Country Planning. (Now Temporary Inspector.)
J. E. Swindlehurst, M.I.C.E., F.R.SAN.I.,
Borough Engineer, Hampstead.
F. M. K. Thomas, joint chief surveyor and contracts manager, John
Mowlem & Co. Ltd., for services in rebuilding the House of Commons.
Peter J. Williams, L.R.I.B.A., Principal Regional Architect, Ministry of Health.
James A. Wright, M.C., A.R.I.C.S.,
Senior Architect, Ministry of Works.

MRE

Eric L. Bird, M.C., A.R.I.B.A., Editor,

R.I.B.A. Journal.

Mrs. E. D. Hughes, F.R.I.B.A. For public services in Kenya.

P. J. Luxton, Chief Clerk of Works. Ministry of Works. For services in

Ministry of Works. For services in rebuilding the House of Commons.

L. G. Pargiter, Senior Architect, Ministry of Works. For services in rebuilding the House of Commons.

Eric J. Powell, Senior Chief Technical

Officer, Ministry of Works. For services in rebuilding the House of Commons.

G. P. H. Watson, F.R.I.B.A., Senior Investigating Officer, Royal Commission on Ancient and Historical Monuments

(Scotland). Mr. R. W. Haddon, C.B.E., who receives a knighthood is Chairman of the Ministry of Agriculture Publicity Advisory Committee, is Chairman and Managing Director of Farmer & Stock-Breeder Publications Ltd., Deputy Chairman of Associated liffe Press Ltd., and a Director of Hiffe & Sons

Competition Open

The Wirral Urban District Council are promoting a competition for the design of a Festival Hall to be erected at Heswall, Wirral, Cheshire. The premiums offered are £500, £350 and E250. The Assessor is Mr. P. Garland Fairhurst, M.A., F.R.J.B.A.
The last day for questions is Feb-

ruary 6, and the last day for submitting designs is April 28, 1951.

Conditions (deposit 2 guineas obtainable from Mr. William F Roberts, Clerk to the Council, Council Offices, Heswall, Wirral, Cheshire.

ANNOUNCEMENT

Mr. A. Beaumont Owles, A.R.I.B.A., who has been associated with Herbert S. Bostock, L.R.I.B.A., for several years has acquired his Practice at Southall. In future the practice will be known as Bostock & Partners and will continue at Central Hall Buildings, Station Approach, Southall, Middlesex (Tele-phone No. Southall 3491-2) where he will be pleased to receive trade catalogues

The Building Centre

An announcement concerning the future of the Building Centre has been sent out by the Director, Mr. F. R. Yerbury.

The Council of the Building Cenae, says Mr. Yeroury, have tell for some time that the premises which the building Centre occupies are inadequate for its activities and for future developments and steps have been taken to investigate the possibility of acquiring larger premises in a suitable and easily neighbournood, accessible which would provide greater space for exhibits of all kinds and would allow for development of the Centre on lines which have always been considered desirable.

The Council has now been fortunate in acquiring a building which will meet its need for some years to come. It is situated in Store Street off Totten nam Court Road and adjacent to Bedford Square and London University and it has, what is considered very important, excellent car parking facili-ties at hand. The building has about three times the area that at present in use by the Building Centre and is, the Council feels, in every way suitable. In selecting the neighbourhood the Council had in mind the convenience of those engaged in the Architectural Profession and the Building Industry and the needs of Students. It is, generally known that the Bloomsbury area is favoured by Architects and various professional societies and it is estimated that there are at least 2,000 Architects and Quantity Surveyors and their Assistants and Students working in the area. Many of the Societies and Schools, whose members make use of the Centre, are within a few minutes' walk.

Apart from the very great increase

of space available for exhibits it will be possible to provide a theatre for lectures and film demonstrations and also to allot a considerable area for temporary exhibitions, such as those which proved such an attraction before the war. The lecture theatre and special exhibition space will be available to various kindred Societies for their meetings and programmes of lectures.

The building needs certain alterations and repair of war damage and it is not yet possible to say how soon the Building Centre can be transferred. Exhibitors will be fully informed of this point and also be communicated with immediately preliminary plans have been made for the layout. Many exhibitors who have not yet been able to obtain all the space they wished for in the present building will be able to install their exhibits on a much bigger

The Council believes that the action they have taken will meet with the full approval of their supporters and look forward to their collaboration in the future in the building up of an institution second to none of its kind in the world

COMING EVENT

Illuminating Engineering Society

• January 9 at, 6 p.m. At the Lighting Service Bureau, 2 Savoy Hill, W.C.2. Speaker: Brightness Engineering. W. Robinson.

R.I.B.A. January 9, at 6 p.m. Announcement of Award of Prizes and Studentships, "Draughtsmanship of the Past." Speaker: H. S. Goodhart-Rendel.

Royal Sanitary Institute

January 10, at 2.30 p.m. "The Height of Rooms in Dwellings in Relation to Health and Comfort,"
Speaker: Professor G. P. Crowden.
The Society of Genealogists

January 10, at 4 p.m. "A Country

January 10, at 4 p.m. "A Country House Index—A Link between the Architect and the Genealogist."
 Speaker: Michael Trinick.

V. and A. Museum January 11, at 11.30 a.m. "The Crystal Palace of 1851." Speaker: C. H. Gibbs-Smith.

 H. Gloos-Smith.
 Institution of Structural Engineers
 January 11, at 5.55 p.m. "A Comparison of the Bearing Power of Footings on Dry and Inundated Sand." Speaker: W. Eastwood. I.M.B.A.

January 10, at 1 p.m. At Derry & Toms Restaurant. Luncheon and Ninth Annual General Meeting of Central Area No. 1.

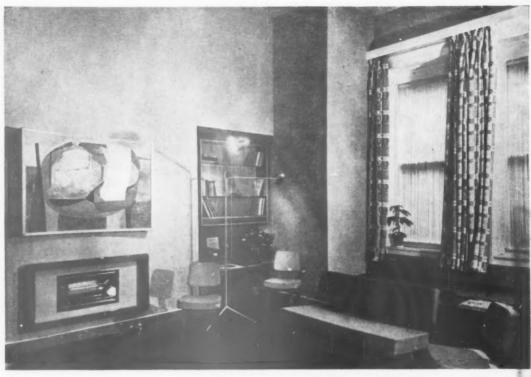
January 8, at 5.30 p.m. Ordinal General Meeting. "Developmer Charges—A Surveyor's Practic Notes." Speaker: W. R. Brackett, at 5.30 p.m. Ordinary deeting. "Development Practice

ADDENDUM

Howard Sadler, assistant Architect for Henry Dickens Court, Kensington described in last week's issue, is an Associate of the Royal Institute of British Architects and of the Institution of Structural Engineers.



The Building in Store Street, which has been acquired by the Building Centre, as it is today. Gontran Goulden, A.R.I.B.A., is Architect for Reconstruction.



THE INSTITUTE OF CONTEMPORARY ART

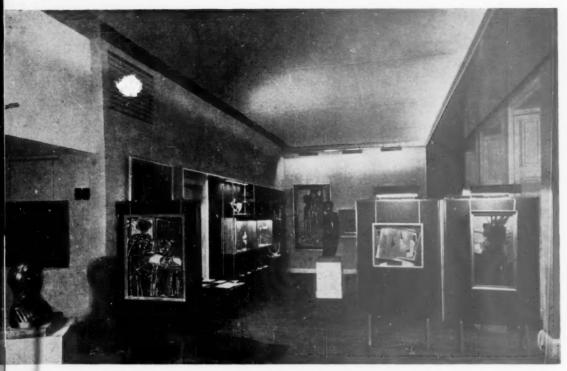
THE I.C.A. was founded in 1947 with the object, in the words of its Chairman, Mr. Herbert Head, of providing in the heart of London a centre where the living arts of painting and sculpture, of architecture and music, of theatre and film, can meet and mutually inspire each other.

As a first step towards the establishment of an Institute comparable to the Museum of Modern Art, New York, the I.C.A. took over the first floor of No. 17 Dover Street, which has been converted by Jane Drew and Maxwell Fry. The accommodation now consists of a main exhibition hall and clubroom fitted with a small bar and cloakroom, connected by swing doors which when thrown open give a space for concerts and discussions that can seat 200 people. The Director of the I.C.A. is Ewan Phillips.

Architects: Fry, Drew & Partners. Assistant Architects: Mary Reader and Melville Poole. Assistant on Funtiture; J. Padiak. Consulting Engineers: Ove Arup & Partners. Consultant Electrical Co. Ltd. Ventilating Contractors: Troughton & Young (Heating). Farniture: Designed by Fry, Drew & Partners: made by H. Morris & Co. Ltd. of Glasgow. Currains: Designed by Fry, Drew & Partners: Designed by Fry, Drew & Partners: made by H. Morris & Co. Ltd. of Glasgow. Currains: Designed by Fry, Drew & Partners: made by Stage Electrical Equipment Ltd. Eater Fire-Ferrant Ltd. Carpers: Grays Carpets & Textiles. Radiogram: H.M.V. Fire Surround: Kandya Ltd. Door Furniture: Rennis Ltd. Paint: Ripolin. Chair Covers: T. & J. Tinker Ltd. Design on back wall of Bar: Eduardo Paolozzi. Small Standard Lamps: Designed by E. M. Shotlander. Concerte table: Designed and made by E. M. Shotlander. Concerte table:

Above: The Clubroom. Carpet, purple: furniture in honduras mahogany and birch, upholstered in lemon and dove-grey whipcord. Walls, white. Below: The bar.



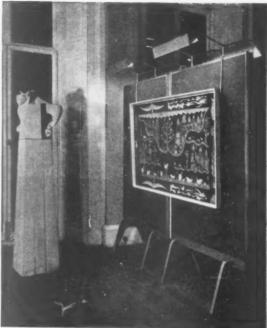


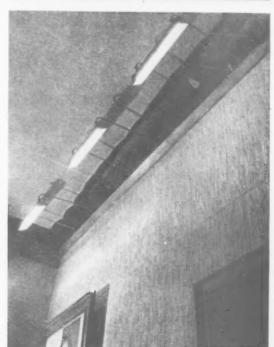
General view of the main exhibition hall, and (below) one of the show-cases.



The Institute of Contemporary Art, Dover Street, W.I.

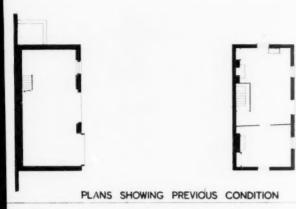






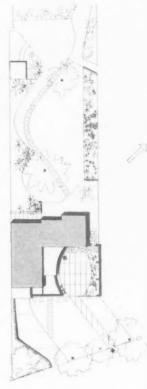


The Institute of Contemporary Arts, Dover Street, W.I.









112 HAMPTON ROAD TWICKENHAM

PLANS OF CONVERSION

The living room



T W O
C O N V E R S I O N S
O F S T A B L E S

II2 HAMPTON ROAD TWICKENHAM

> JASPER LODGE EAST MOLESEY



The above view of the entrance to 112 Hampton Road shows the fluted rough-cast finish to the yard wall. The entrance door is painted turquoise blue and the side glazing is in reeded glass.

The view below shows the garden front. The roughcast wall finish has a multicoloured aggregate.



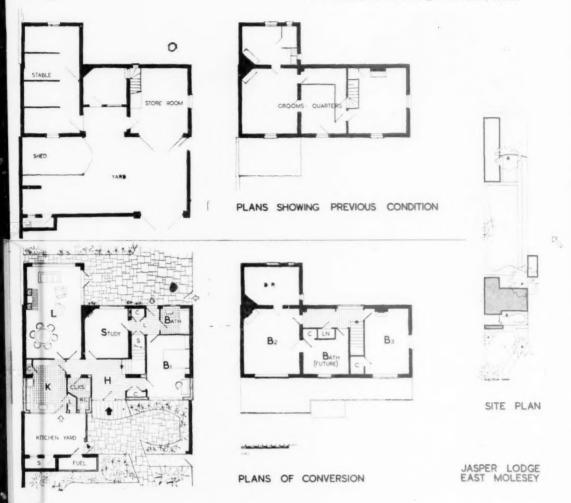
architects:

ERIC LYONS

AND

G. PAULSON

TOWNSEND



THE programmes for these two Contracts were similar. It was required to convert old stabling accommodation into permanent houses. Both the original buildings were simple brick structures, without D.P.C.s or oversite concrete. The brickwork, flooring and roofs were fairly sound and limitations of costs demanded economical adaptation of the existing structures. The works included the insertion of D.P.C.s to all existing walls, laying on of drainage and all services, complete plastering and decorations. The cost of each conversion was approximately £1,000, and the Contractors for both Contracts were Messrs. E. Gostling (Builders) Ltd.

orchitects: ERIC LYONS and G. PAULSON TOWNSEND



JASPER LODGE EAST MOLESEY

These two views show the way in. The front door, below, is painted blue. In the top picture the external wall to "store" and "fuel" is colour washed pink while the old walls of the house are a silver-grey.





BUNGALOWS
FOR AGED
PERSONS
LONGMEAD
ROAD ESTATE
for
Esher
Urban
District
Council

The block of bungalows for aged persons forms the second stage of the development of this Estate. The first stage of forty-four houses are under construction and a block of 18 two-bedroom flats seen in the perspective view will be erected under the same contract as the bungalows. The bungalows are sited adjacent to the entrance to the Estate. The entrance porches and living rooms face south and overlook the entrance road. The porches are shielded on three sides and partly roofed and are intended to form sheltered sitting spaces where the elderly tenants can enjoy the scene of activity. orchitects: ERIC LYONS AND G. PAULSON TOWNSEND





In last week's article on Vernon Holme Junior School, Kent College, Canterbury, architect Edward D. Mills, the plans showing the conversion of the house into a school were omitted by an oversight and are given on this page. The small photograph shows the large window lighting the dining room, above which is a dormitory.

LIBRARY NOTES

Pointed Europe

N. John Harvey has by now established himself as one of our most indefatigably learned experts on many aspects of mediaeval architecture that earlier generations had allowed to become needlessly obscure; though not all will be prepared to accept his as the last word on the mystique and philosophy underlying late mediaeval art, he does great service by telling us much that we should have known before on the geography and authorship of many Gothic masterpieces. He has given us much data on those responsible for the greater buildings. of post-Norman and pre-Reformation England. He now goes on to do the same for the vaster

goes on to do the same for the vaster field of Gothic architecture as a whole.

His latest book, "The Gothic World" (Batsfords, 30s.) does much, within the limitations of its space, to open up new vistas of a kind that Mr. Sacheverell Sitwell has presented, in re Baroque, to our sometimes insular perception. It is valuable, for instance, in a country whose very Gothic developed in a some valuable, for instance, in a country whose very Gothic developed in a somewhat distinctive and cross-channel seclusion, to realise how international were the achievements of the leading architects of mediaeval Europe. They were helped, of course, by the existence of a common cultural tradition and a common faith. But transport facilities were less elaborate than now, and it is remarkable to find that the Gothic masters of Germany were the authors of great churches all over Central Europe, and that a French designer could be responsible for a cathedral in Sweden.

One of Mr. Harvey's main arguments is that the pointed arch is everywhere the sign-manual of what he calls Gotnic culture; it would seem from his book that there is much to be said for the pre-Rickman term of "pointed" as an all-embracing title for the art of the later Middle Ages. He sees in the East, and in such influences as the Crusades, the true origins of "Pointed"; it may be that here he does less than justice to warke pointed vaults such as that at sign-manual of what he calls Gothic early pointed vaults such as that at Durham, or to the arches in the arcade at Malmesbury, but there is much in his argument even if one does not accept all that he puts into his "philosophy of Pointed Art." Not all Mediaevalists would be as strong a partisan as Mr. Harvey against the two great factors in mediaeval life, Romanesque and the work of the monks and schoolmen.

Where Mr. Harvey's work is of most value is in the passages in which he discusses the extent to which he finds that the architects of the Middle Ages worked to fully perfected plans and drawings, the life, status, and incomes of those who designed the most im-portant buildings, and in the survey he gives of the geographical spread of original Gothic art. He has a realistic section on the methods and processes of building, and although it is clear that the erection of a great Gothic church was no haphazard process, conducted entirely without prior paper work, it was a rarity for complete designs



Mr. John Harvey, whose latest book, "The Gothic World," Is reviewed on this page.

to be got out before work was started. He is interesting on the early use of Baltic timber and on other transported materials, and later there comes an illuminating passage on the money incomes, reckoned in modern terms, of the greater designers; some modern architects may start wondering why they did not practice in 1400. Not only does Mr. Harvey give us his usual wealth of detail on the names and personalities of those who achieved the great churches and secular buildings of Gothic Europe: he takes us near enough to their actual manner of life to demolish still further the idea that inexpert anonymity was the main feature of the mediaeval the main feature of the mediaeval master mason. But even so I doubt that the names of such masters as Peter Parler and Pierre de Montreuil will ever stand in quite so individual a position of prominence as those of Bramante or even of Borromini, Van-vitelli, and the other lesser designers of the Baroque age; in the Middle Ages the individuality of the artist was more at a discount in favour of the causes for which men worked.

comparatively concerns itself with the inevitably larger and more important churches of the class designed by the more notable masters whose names and methods are still known; there is much less, particularly in relation to countries abroad, on the smaller parish churches of the type that were so often built piecemeal and in many cases by the small local builder. Even in the case of the finer parish churches one misses the same scholarly examination of such features as the towers of Somerset or village churches in England and France. none the less Mr. Harvey's feat, aided by an excellent corpus of illustrations, is of great value. His matter on the geography of pointed architecture is a

special revelation. Though its centre was Northern Europe, and though "Pointed" only found partial acceptance in the Mediterranean lands, the style is extraordinarily coterminous with Latin obedience. Apart therefore from the obvious centres, one finds it as a colonist-exotic in such orthodox and Moslem territories as Lusignan Cyprus and the Latin Kingdom of Jerusalem. Within its more normal sphere it is of great interest to find strong English influence in Norway, and not only in the best known example of Trondheim. But the greatest thrill of all is in the text and pictures which make one text and pictures which make one realise that Columbus, Cortes, and Pizarro were just in time for the tradition of Spanish Gothic to find natural expression in the first great Spanish churches of the West Indies, Mexico, and Peru. Such churches are senior to the fantasies of Indo-Hispanic Baroque, and the Gothic of the Americas is something older than St. Patrick's or something older. the Harkness Tower. BRYAN LITTLE.

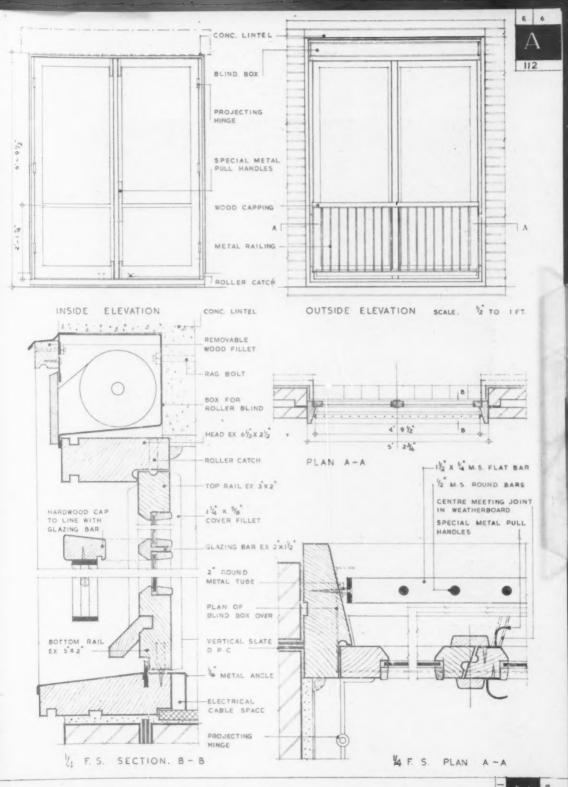
A Gentleman Architect

RAROQUE in England being largely confined to such items as church monuments and interior decoration, our few architects who did not hesitate to exploit it for their whole designs are of more interest and importance English architecture than in the Baroque world as a whole. The four most important are Wren (to a certain extent). Hawksmoor his pupil, Vanbrugh, and Archer. It is significant that only the second named had anything like what we have the second recommend to the second named had anything like what we have the second second to the second second second to the second second second to the second should call a systematic architect's training; Vanbrugh and Archer were essentially amateurs and indeed, for all their large output, one might almost describe their architecturee as a side-

describe their architecture as a side-line; they certainly drew their main income from other sources. Mr. Whiffen's latest work (Thomas Archer, Art and Technics, 8s. 6d.) does most valuable service for Archer, who has not before been the subject of a book to himself. It is a brief research monograph well documented and ex-tremely well illustrated, including also a list of Archer's known and attribut-able works of which more anon. It is a pity that its length does not allow the author to explore some of the fascinating vistas in the life and culture of the years 1668-1743 that are opened up by what we know of Archer's life,

He was a Warwickshire country

gentleman of good family whose nephew became a Peer; it was as a gentleman of the county, and not yet as one of Queen Anne's Church Commissioners, that he designed his famous St. Philip's in the growing township of Birmingham. His architecture, particularly his Baroque leanings and direct influence on his work, unique in English archi-tecture, of Roman seicento designers such as Borromini, seems to have been a result of the Grand Tour, reinforced later by the books available to Europe as a whole. Then in 1705 he became Groom Porter, an office in itself one of those fascinating yet indefensible sine-





FRENCH WINDOWS, HOUSE AT KINGSTON, SURREY

ARCHITECTS: TAYLER & GREEN

cures that Burke so ruthlessly exposed, but in this case carrying with it the lucrative task of licensing gaming houses. Thereafter his fortune was made; his career is an interesting parallel with that of Vanbrugh, and one would not be surprised to hear that he too had written rigate plays. But one of Mr. Whiffen's best points is where he counters the theory that Archer was Vanbrugh's "pupil." Their dates apart, there was little likelihood for any close connection, but rather for rivalry sharpened by political antipathy. For Vanbrugh the Whig was the very opposite of Archer the strong Tory. His politics were what brought Archer many of the commissions with which Mr. Whiffen here deals; without them, for instance, he could never have become a Church Commissioner or himself designed churches under the "Sachever-ell" Parliament of 1710.

Some of those who read this little book may wonder why it has been allowed to include a list, and several photographs, of buildings only "attri-buted" to this remarkably interesting architect. I do not, moreover, feel that its author has here done full justice to the high quality of his own research which seems to have raised many of these particular works into the "certain class. Of those listed as "definite" I can only say that they include secular buildings as well as the three famous churches, and that motifs of design are shown to be shared by houses and churches alike. Finally, it is good to find due attention paid, from the bookjacket onwards, and at a time when the fate of its shell is presumably in the balance, of Archer's most exciting building, the church of St. John, Smith Square, a masterpiece that proves as do others in England, that our 18th century culture was part of a European

BRYAN LITTLE.

Parliament House

By Maurice Hastings, M.A., PH.D. London; The Architectural Press. 12s. 6d.

A VERY good book, it is informative and interesting, it is amply illustrated, the price is not unreasonable and, best of all, the author has been bold enough to write in English instead of in the obscure and pretentious jargon customary among those who write on Art and Architecture. The publication of a book that is easy to read is so rare in these days that it is an event and an author who is content to tell a straightforward story in language that could be understood by a child of twelve is something of a prodigy.

Dr. Hastings has compressed a

Dr. Hastings has compressed a quantity of information into Parliament House that most modern authors would have spun out into three times the amount of verbiage. He describes the buildings that have occupied the Westmisster site from Edward the Confessor's Palace up to the recently reconstructed House of Commons, but he does not confine himself to a description of the buildings themselves, he also explains the influence of the architectural background upon the generations of parliamentarians who have conducted their debates within the walls of the Palace

of Westminster. In particular he develops a very convincing argument to the effect that it was the seating plan of the old collegiate Chapel of Saint Stephen that led to the British system of Party Government. "In studying Saint Stephen's." says Dr. Hastings, "we become aware that to a large degree the building itself created what we mean by the House of Commons. Here it was that, at long last, the lowliest of the three Estates of the Realm became the most powerful body in the Kingdom. A psychological change seems to come over the members once they are in possession of a building of their own—a place which is not some other body's chapter house or refectory, or simply hired for the occasion."

or simply hired for the occasion."
This is a book that will be appreciated not only by architects and students of architecture but also by those who wish to understand the political life and activities of Britain to-day. It has been eagerly read not only by your reviewer also by various members of his family, including a visitor from Scan-dinavia. All the readers have awarded Dr. Hastings high marks, he has a good story to tell and although he must have worked very hard to collect his facts not make any attempt to impress his readers by means of abscure references and quotations or by foot-notes or bibliographies. There is a There is a certain dry humour in his writing and there is no doubt that he has enjoyed exploding the myths and errors that have grown up about the history of Saint Stephen's Chapel. The reader, with a pleasant feeling of superiority, is able to join in the laugh at the expense of the pundits and, if ghosts read, there is not doubt that W. R. Lethaby's puckish spirit will join in the laugh at own explosion

Having nothing but praise for the author it only remains to point out certain shortcomings in the illustrations. Firstly, that it is most unfortunate that the publishers found it necessary to ruin several of their excellent plates by spreading them over a double page and folding down the middle, for an example see pages 136 and 137. The excuse is perhaps that by doing this it has been possible to reuse blocks originally made for the larger pages of the Architectural Review, but whatever the reason it is a head thing and a false economy. The second point of criticism is the deplorable drawing of the reconstruction of St. Stephen's Chapel on page 75.

After all the trouble that the author has release to wrong the property of taken to unravel the facts the draughtsman might have put up a better performance in presenting them. useless for a less able artist to imitate a technique that Osbert Lancaster has made his own, and even if the attempt had been more successful it would not have been appropriate as an illustration to the serious and competent work

of Dr. Hastings.
JOHN BRANDON-JONES.

Modern Swiss Architecture 1925-1945

By Max Bill, Tiranti, £3 18s.

WITH very few exceptions every contemporary Swiss building of importance has been carefully presented

with photographs, plans, constructional notes and details. It is a document of modern Swiss architecture from its beginning until the end of the war showing its development over a period of twenty years.

The book is presented in the form of loose sheets, one sheet for each building, divided up into five sections—(1) Industrial, (2) Bridges, (3) Hospitals and Housing, (4) Recreational buildings, (5) Educational and Ecclesiastical. The sheets are enclosed in a stout cardboard case.

The information is presented in the form of a documentary file making no attempt to present anything but the cold facts. This is not suggesting that Swiss architecture is a series of cold facts. On the contrary Swiss Architecture has developed a traditional functionalism which has been only equalled by the Scandinavians. The point about the presentation is that it is free from deceiving stunt photographs and the too familiar complementary padded text.

The text is well laid out in a standard form, making it very easy to compare the plans, details, costs, etc., of one building with another. It is printed in English, French and German, an example which could well be followed by publishers in all countries when issuing any book of international interest. Too many books have to be struggled through with the remains of long-forgotten Matriculation French and German.

Many of the buildings illustrated are old friends: some had almost been forgotten. They vary from the heavy monumental grandeur of the Fribourg University to the lightness of the Maillart bridges. Housing, schools, hospitals, churches and factories are all well represented, alongside a cycle stadium, shooting range, train and a bus. It shows the wide field covered by Swiss Architects and accounts for the high average standard of Swiss design.

high average standard of Swiss design.
"Art for art's sake" is a dangerous plaything in the hands of the contemporary architect but the Swiss have successfully avoided this pitfall. Nearly all the buildings presented have the fundamental quality of looking Swiss. They are not stamped with the familiar label "International Style"."

"International Style." The first Modern Swiss Buildings were erected between 1925 and 1930. Theories were reinterpreted to suit the conditions of the country. Years of building practice eliminated the weaknesses which generally curb a revolutionary movement in its infancy.

ionary movement in its infancy.

Switzerland broke from the superficial formalism of L'Art Nouveau and developed a contemporary style with traditional roots.

Swiss building reflects the country's size. Very few buildings could be described as being on a grand scale. They show a meticulous care for detail which results in a lasting soundness.

Turning over the sheets we are made to feel jealous of the Swiss landscape and perfect building sites. This is not a pure coincidence, however. To their credit the Swiss attach full importance to landscaping.

credit the Swiss attach this importance to landscaping.

The editors, who include Max Bill, have compiled this volume successfully without bias towards any particular trend. As a history it fills an important gap in the architect's library,

The constructional details are very useful but it would have been an ad-vantage if a few more could have been illustrated. It is a valuable record of Swiss achievement in the architectural

A. R. MOODY.

English Interior Decoration, 1500-1830

By Margaret Jourdain. Batsford, 3 gns.

THIS work is based on the four volumes of the Library of Decorative Art published by Messrs. Batsford between 1914 and 1924. These com-prised two volumes on Furniture and Decoration in the middle period (1640-1760) and separate volumes on the Early Renaissance and the later Classical Revival, in which Furniture and Decoration were treated together. The present volume covers the whole ground from 1500-1830 as far as interior decoration is concerned. A second volume is to follow on the furniture of the same period. The book is as magnificently produced as the subjects which it Some of the material is taken from the older two volumes, but many of the photographs have been specially taken for the new production. Sections have been added to show photographs of contemporary buildings in the United States which are particularly interesting. They bring out most clearly the time lag in taste resulting from the great distance between the two countries. Few people could be better qualified than Miss Jourdain to write one or both of these two new volumes, as she is equally at home in both branches of the subject. Her knowledge is in fact almost unrivalled.

What a wonderful record of treas-es the book contains—a splendid splendid antidote to the depression of the present austerity age! The contemporaries of Henry VIII, enriched by the spoils of the monasteries, were the first nouveaux riches of modern times. Even the next generation in Elizabeth's reign, "turbu-"turbulent and energetic" as Miss Jourdain aptly calls them, were still more moved to splash their coarse magnificence around them than to create beauty for its own sake. Even now, much they have left us seems heavily weighed down by a monumental vulgarity that one both admires and deprecates at the same time. How much less should we like their productions if we saw them as they were originally made for the most part, with the wainscoting, chimney-pieces, ceilings and staircases brightly coloured.

Perhaps it should be some comfort to our troubled age that, out of the equally torn distracted period of the Stuarts, there evolved a taste which had no need shout for fear of not being heard Georgian art was as aristocratic as the Georgians themselves. The second half the century under the influence of Adam, interior decoration reached a point in which England led the world and which has never been surpassed in the elegance of its taste. Even the Regency, impeccable though this was, Regency, impeccable though this was, cannot compete with its predecessor in its detail and colouring. It is a melancholy reflection, that if the period covered by Miss Jourdain's book had been continued beyond 1830 to the

Great Exhibition, it would have been plain that the wheel had gone full circle to another age of nouveaux riches in which what mattered most was to display the house-owner's wealth in a mass of elaborate shapes leaving no space where the eye could rest in peace.

ANTONY DALE.

Decorative Art

The Studio Yearbook 1950-51. Editors: Rathbone Holme and Kathleen Frost. The Studio Publications.

T is difficult to believe that so much that is pleasant is actually being created in this era of atom bombs and iron curtains. The Editors are to be congratulated both on the high standard of this year's publication and on the excellent selection of subjects, which cover the field of domestic art and decoration.

If Frank Yerbury, in his lucid and chatty article on the intricacies of private house-building in this country to-day, is right (and indeed he is-politics apart), then we can console ourselves with fine photographs of a variety of lovely things, designed and made in Britain which we could put in our homes if and when we finally get them. Not that this book deals only with British goods; far from it, but it is so good to see examples of home-produced furnisee examples of home-produced furni-ture, silver, pottery, fabrics and so on, holding their own for sheer elegance and simplicity, with Continental and American counterparts. And it might well be said that the whole standard of these designs is noticeably an improve-

ment on any for a great many years.

The Architectural section with which the book commences, includes three examples of English contemporary houses, built under our licensing restrictions. These have already appeared in the pages of the A. & B. N.; Roff Marsh's traditional house at Chelmsford (illustrated by the page). trated by the only photograph in the book which do not do justice to the subject), June Park's bungalow on a sloping site, and Taylor and Green's expandable project in Surrey, with its expandable project in Surrey, with its temporary walls and roof. One could call them "What can be done (for £1,300)", "What might be done (if we could spend a bit more)", and "What will be done (when we get a supplementary licence)". These are all rather sober but charming and dignified: and, of course, only just too large to serve as garages for some of the exotic American bungalows which follow. The night photograph of Neutra's house in Colorado has probably already enticed more than one European architect to emigrate to a continent which has deserts.

There is a tribute to the Council of Industrial Design's efforts towards the improvement of manufactured goods To mention a selection of the articles illustrated would make the book appear to be a catalogue for the Ideal Home Exhibition, and would be an injustice to the many which one would have to omit for space sake. This is certainly a pleasant book to have lying about in the drawing room and a useful source of inspiration in the drawing office.

Ely Cathedral

By Geoffrey Webb. Lund Humphries. 3s. 6d.

THIS is another of its publisher's admirably inexpensive and at the same time expert studies, this time on a great monastic cathedral whose gradual building was the joint work of Benedic-tine Abbots and Priors and of Bishops whose see was rich and hence allowed building work and decoration of rare opulence. There are 27 excellent photographs, mostly of main architectural features, and Prof. Webb has written a short but brilliant text wherein he succeeds in making many important historic and architectural points. explains how each succeeding wave of building work at Ely was much bound and conditioned by earlier work. Only the great octagon of the 14th century, with its innovating, dome-like effect, was a radical departure whose opportunity had only come with the splitting open of the church by the fall of its central tower. He also brings out the adventurous nature of the late 12th century pair of western transepts flanking an arcaded tower in a manner borrowed from N.W. European Romanesque; they provide an "architectural experi-ence" hard to parallel anywhere in hard to parallel anywhere Europe and only surpassed by the great vista of Elv's own seatless nave (whose emptiness, like Wyatt's opening out of Salisbury, is not medieval, but due to Essex's tidying up of monastic furnishings in the 18th century). The only point which might, I think, have been better stressed is the way in which Ely's mid-14th century Lady Chapel, finished by Bishop Simon de Montacute, must by bishop simble de Montacute, must have been very similar to the upper chapel at St. Stephen's, Westminster, that later became more famous as the House of Commons; Montacute had the very highest connections at Court and would have found it easy to call on the designers of the contemporary Court school

So short a book as this inevitably has concentrate on main architectural features, so one misses extensive reference to such points as the tombs, chantries, the Palace, and Wren's Renaissance door. One caption is wrong; the interior view of the Lady Chapel is looking westwards, not to the

BRYAN LITTLE.

A Guide to Designing Windows

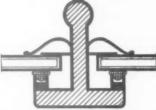
By Neville Woodbury, A.R.I.B.A. Published by Neville Woodbury Ltd., I Ferdinand Street, N.W.1. 6s. net.

THIS queer book of 77 pages (23 of them virtually blank), comprising 38 rough sketches, hardly lives up to the promise of its title; in fact it is hard to imagine any architectural draughts-man who does not know more than the author essays to tell him. Even within its narrow limits there is tautology; several proportional "rules" are given, ignoring the well-tried relationship of the square and its diagonal; the glossary is misleading; directions are vague except for an occasional truism, and even cept for an occasional mannage spelling is uncertain. Must we now accept "lintol" in place of the Scriptural "lintel"; it seems to be creeping in.

The book is nicely produced on experience.

cellent paper.

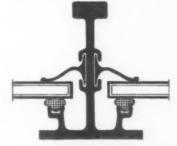
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FIRE ESCAPE STAIRS



Fire - escapes are made by the Lion Foundry to suit any type of building, hospital, hotel, factory, office, house. They can be made of the "straight" type as shown on this photograph or of the "spiral" type.

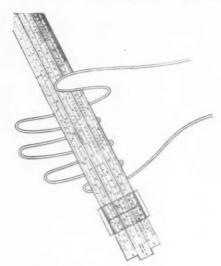
The cast-iron treads and landings ensure a life as long as the building itself. Cast lasts

The fire - escape stairs shown here are typical of many made and erected by Lion Foundries.

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DEPT. A.

KIRKINTILLOCH, Near GLASGOW



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NEWS of the BUILDING INDUSTRY

INTEREST *

Sir Harry Selley replies to the N.F.B.T.E.

A SPECIALIST TEAM, studying Education and Training for Industry, sailed for the United States in the Queen Mary on Thursday, The members are representa tive of industrial management, trade unions, the Ministry of Labour, the Ministry of Education and the Scottish Education Department jointly, and of technical colleges. The team will be led by Group-Captain P. G. Thompson and their terms of reference include consideration of American methods for the training of operatives within industry and for industry in Technical Institutes and their further training with a view to promotion to more responsible work.

to more responsible work.

Among the industries represented in the team are engineering and building. The tour is undertaken under the auspices of the Anglo-American Council on Productivity and the dollar costs are met through the technical assistance provisions of the Marshall Aid

THE TOKEN IMPORT SCHEME is to be continued in 1951 for the same countries and the same commodities as in 1950. The Token Import annual quota will, however, be increased from 20 per cent. to 40 per cent. by value of each manufacturer's average annual trade in 1936-1938 with the United Kingdom In the commodity in question. Where a manufacturer in one country has ceased to make a commodity for which he is, or was, entitled to a quota under the Scheme, his quota may be allocated to other manufacturers of that commodity in that country, whether or not they have been qualified to participate in the Scheme hitherto.

The countries participating in the Scheme are: Australia, Belgium and Luxembourg, Canada, Denmark, Finland, France, Holland, Pakistan, Sweden.

India, Italy, Norway, Switzerland and U.S.A.

Applications from importers in the United Kingdom for import licences under this Scheme can be given consideration only when accompanied by the relative documents obaccompanied by the relative documents ob-tained by their suppliers from the appropriate overseas authority. A description of the document required and the names of the respective issuing authorities are available from the Board of Trade.

BRITISH STANDARDS for electrical refrigerators and food freezers for household use in all climates (B.S. 922: 1950) and for use in all climates (B.S. 922: 1950) and for household use in temperate climates only (B.S. 1691: 1950) prescribe the general construction requirements, the methods of determining the performance and computing the volume and shelf area of electrical refrigerators designed for household food storage and of electrical refrigerators designed as household food freezers and having net volume up to and including 12 cubic in these standards have also been included. These British Standards differ from one another only in respect of temperature ranges

and minima test pressure ranges.

Copies can be obtained from the British
Standards Institution, Sales Department,
24 Victoria Street, London, S.W.I., price 3s.

each post free.

PLANT HIRE RATES are the subject of a new M.o.W. Order which lays down revised maximum rates of hire and certain modifications in capacity ratings. This Order can be obtained from H.M.S.O. and came into effect on January 1. Items controlled are Mobile Road Cranes, Crawler Excavators, Crawler Tractors, Scrapers and Trenchers.

"It was with amazement and regret that I read the statement in reply to my criticisms, issued by the employers' federation which, this week, reached agreement with the operative unions about incentive schemes.

"I have only three observations to make on the statement issued by the employers' federation concerned. First, that although the Federation of Master Builders, of which I am President, is not represented on the National Joint Council for the Building Industry, this is a matter which should be remedied, and no doubt in due time the 10,500 members of my Federation will have a voice in the settling of wages and conditions which apply to the men to whom they give employ-ment. The employers' federation have not consulted their rank and file membership, neither have they been informed of any progress in these negotiations. The new incentives agreement is, however, not yet a decision of the National Joint Council, but an agreement entered into by one employers' federation in the industry and the trade unions.

"My second observation is that my Federation is all in favour of real incentive schemes designed to increase productivity and lower costs. We only fear the type of scheme which increases costs without a corresponding increase in production.

"Thirdly, I would say that the overwhelming proportion of builders throughout the country, especially the medium-sized and smaller firms, have great difficulty in working such schemes, and that grandiose paper plans and agreements reached at the top are not based on the wishes

"I regret that a legitimate criticism made by a man like myself, who has spent fifty years in the building industry, should have called forth a statement—which is nothing more nor less than a recruiting speech—from a body which lays claim to represent all builders in their negotiations with the trade unions and on responsible Government committees."

THE TIMBER CONTROL Area Office in Edinburgh was closed down on January 1, 1951; after that date all timber inquiries, correspondence, etc., for Scotland should be addressed to Timber Control, 29 Park Circus, Glasgow, C.3.

STRESSED CONCRETE DESIGN LTD. the licensees for the Magnel-Blaton system of prestressing in this country) have moved from 46 Gt. Mariborough Street, W.1, to "Lynton House," 54 South Side, Clapham Common,

THE CONTRACTORS' PLANT section of the 1951 B.I.F. at Castle Bromwich will be extended by 20,000 sq. feet more than last year's area. This section is sponsored by the

LEAD SUBSTITUTE

The rising price of lead may well lead to ine rising price of leda may well lead to increased demand for alternative material. For pipe jointing there are cold caulking compounds available. These compounds form rigid joints which are said to withstand immediate pressure of 60lbs. and up to 300lbs. after 48 hours. The picture shows a joint packed with Philplug P.C.3.

Federation of Manufacturers of Contractors' Plant. The Fair will be open from April 30 to May 11.

MESSRS. TUKE & BELL LTD. announce the death of Mr. Charles William Bell, Chairman and Managing Director.

THE MINISTRY OF SUPPLY has an-THE MINISTRY OF SUFFLY has an-nounced that, as from January 1, 1951, the Ministry selling prices for imported electro-lytic copper in special shapes and to special specifications are subject to additions per ton to the basic price of copper.

THE BATH & PORTLAND STONE FIRMS LTD. have appointed Mr. H. J. Reade provincial sales manager.

THE NORTH BRITISH RUBBER COM-PANY, Edinburgh, announces the appointment of Mr. G. R. McNear as Managing Director. Mr. J. K. Coutant and Mr. D. H. Gordon have resigned as joint Managing Directors.

"SOCIETE AFRICAINE d'ENTRE-PRISES" is the name of a newly-formed firm of building contractors which will operate in Stanleyville, Belgian Congo, with headquarters at 164 Avenue Moliere, Brussels (Belgium).

The new company is a limited liability company registered in the Belgian Congo

with a capital of 10 million francs.

The Congo company will be in the market in the near future for all kinds of civil engineering and public contractors' equip-ment and building materials.

Interested United Kingdom manufac-turers should send their catalogues, technical and commercial literature and specifica-

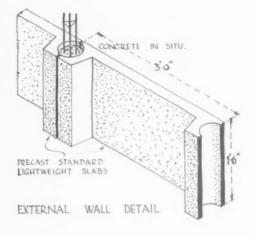
cal and commercial literature and specifica-tions, etc., of suitable plant and materials to the company's office in Brussels. It will be appreciated if any action taken on the above is notified to Commercial Relations and Exports Department of the Board of Trade quoting Reference No. C.R.E. (1B)68897/50.

(Continued on page 26.)

THE UNITROY SYSTEM OF CONSTRUCTION



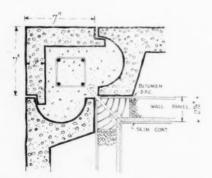
1. Above: a pair of Unitroy houses. Windows are metal casements in timber surrounds. The three standard sizes are 7° $10^{\circ}\times4^{\circ}$ 3°_{1} $2^{\circ}\cdot2^{\circ}\times4^{\circ}$ 3°_{1} and $2^{\circ}\cdot2^{\circ}\times3^{\circ}\cdot4^{\circ}_{2}$. The door canopies are of reinforced concrete cast on site as an integral part of the frame. The roof is clad with asbestos cement purlin tiles laid at 28 deg. pitch. Each tile covers an area of 5°_{2} sq. ft. Alternative coverings can be used.



2. Right: three types of external wall block. In the centre of the picture are the main wall units. At the left of the picture are five reveal blocks and at the right bottom corner a section of one of the U-shaped blocks which form the shuttering for the peripheral beams at first floor and at eaves level.



3. Above: a detail showing the method of constructing the external walls. The total width of each block is 7" which leaves a cavity of about 4½" when the internal panels are fixed. The total wall thickness, finished internally and externally is approximately [1".



4. Above: a detail of the quoin construction. Right: window openings showing the use of reveal blocks and the peripheral beam which carries the first floor joists. Window cills are of standard pattern timber fixed over the cavity.



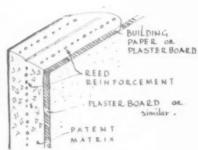
GENERAL DESCRIPTION OF SYSTEM

In this system of house construction external walls are of precast light-weight concrete blocks built on normal foundations, and aligned with the aid of a timber jig. The blocks are shaped at each end so that, when butted, they form shuttering for reinforced columns of poured concrete. These columns carry precast lintol blocks, which in turn act at permanent shuttering for peripheral reinforced poured concrete beams at first floor and eaves level.

The roof is carried on welded steel trusses, spaced at approximately 6 ft. centres and bedded into the peripheral eaves beam at the supports. Internal wall linings and partitions are of patented lightweight panels. These consist of vermiculite matrix, reinforced with reeds and sandwiched between standard sizes of wallboard.

Ceilings are formed of \S in. plasterboard sheets nailed to wooden battens on the underside of the floor or to wooden joists spanning between the roof trusses.

The system is not restricted to any particular plan type. The separate units of the system are described in detail below.





EXTERNAL WALL UNITS

Each main wall unit, 2 ft. 10 in. \times 1 ft. 6 in. \times $2\frac{1}{2}$ in. -is approximately 24 times the size of a brick. The blocks are made with low cement content—each block is capable of carrying its own weight of walling but is not intended to act as a load bearing unit. Horizontal joints are formed in cement mortar. No vertical pointing is needed as the joint is made by the poured concrete of the reinforced columns. Special angle blocks are provided for quoins and reveals to windows and doors are also specials.

PERIPHERAL BEAMS

These are built up of special U section precast blocks spanning between the reinforced concrete wall columns.

INTERNAL PANELS

The size of internal panel is determined by the weight for handling. The largest panels, 8 ft. 6 in. x 3 ft., weigh approximately 170 lbs. The panels are rigid and are framed for ease of fixing. Finished thickness is $2\frac{1}{2}$ ins. For partitions the panels are faced on both sides with any standard wall board. For external walls the cavity face of the panel is lined with building paper. The thermal insulation provided is said to be $U\!=\!0.20$. The panels can be chased for wiring if necessary.

STAIRCASE

The staircase in these houses is an independent prefabricated unit.







SERVICES HEATING

8.3

A new portable electric radiator which came into production in the autumn of 1950. The heater, which is finished in cream stove enamel, measures $28 \, \text{ins.} \times 15 \frac{1}{3} \, \text{ins.} \times 6 \frac{1}{3} \, \text{ins.}$ Power consumption is rated at 750 watts on one element or 1,500 watts. The elements are totally enclosed. The body is of aluminium. The interior design is such that the heater combines convection, conduction and radiation. At present this model is for export only,



FITTINGS OFFICE FURNITURE

Fire protection for office records is provided by this visible record cabinet container which has a $1\frac{1}{2}$ in, thick body packed with certified five-resisting material. The door and body are tongued and grooved and fitted with asbestos tape gasket. The door is of the falling type and is counterbalanced to slide partially into the base of the container when open; the projection forming a table. Insternal dimensions of the container are 26 ins. high \times 29 ins, wide \times 294 ins. deep. External dimensions are 544 ins. high \times 32 ins. wide \times 295 ins. deep. The weight of the container is approximately 64 cws.



PLANT-LIFTING GEAR

F 6

A recent development is this 15 cwt. mobile crane fitted with telescopic mast which extends from 15 feet to 25 feet. A 25 feet to 40 feet extensible mast is also available. Normal jibs can also be used. Advantages claimed for this crane are sensitive control which eliminates back-lash developing due to wear in links and pins, silent self-adjusting hoist mechanism which allows the load to be lifted without releasing the hoist brake and the capacity to travel and steerwith the mast in any position. The crane has a hoisting speed of 150 feet per minute with single rope up to 75 cwts. and 75 feet per minute with double rope up to 15 cwts. Travelling speed is 21 miles per hour. Turning circle is 13 9° and wheel base 5 6°. The power unit is a 6 hp. engine either air cooled petrol or water cooled diesel.



PLANT SITE BUILDINGS

E 2 2

The pictures show an aluminum sectional but stacked for transport and erected. The but consists of 17 identical wall panels and 18 identical roof panels. The diameter of the but is 14 ft. 4 ins., giving a floor area of 600 sq. ft. Roof heights are 6ft. 7 ins. at the wall and 10 ft. at the apex where there is a conse-covered ventilation opening. Sections are botted together from the outside. Erection time is said to be one hour with three men. Flooring is not supplied. Window panels are available, The dismantled but weighs 6 two threes given to the signal of the dismantled but weighs 6 two the signal of the dismantled but weighs 6 two the signal of the dismantled but weighs 6 two the signal of the signal of the dismantled but weighs 6 two the signal of the dismantled but weighs 6 two the signal of the si

MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to:

The Associate Editor,
The Architect and Building News,
Dorset House,
Stamford Street, S.E.I.

Please mark the envelope MOSAICS

INFORMATION AND CATALOGUES RECEIVED

- * The Council for Codes of Practice for Buildings, have issued another pamphile.
 CP3-1 (C) (1950) on "Ventilation."
 This chapter deals with requirements for the ventilation of buildings in relation to the rate of fresh air supply, air movement, temperature of incoming air, humidity and purity of air. Copies can be obtained from the British Standards Institution, 24 28 Victoria Street, S.W.1, price 2s. 6d.
- * The International Lighting Review, published by Stichting Frometheus, Amsterdam-Postbox 7048, Netherlands, contains news of lighting schemes and ideas from Sweden, Paris, Netherlands, Australa, New Zealand and other countries, Here is information on attractive forms of fluorescent lighting in cinemas, liners, schools, lighting of railway goods yards, and methods of rearing chicks by means of infra-red. This magazine is very easy to read and has some extremely good illustrations.
- We have received from W. T. Henley's Telegraph Co. Ltd. a booklet which has recently been published. It contains a complete list of the goods they manufacture—Aerial Cables, Wiring Systems, Mains Cables, Distribution Equipment, etc.—and there is a list at the end giving the addresses of the branches all over the country where Henley goods can be purchased.
- * The second edition of Road Note No. 4, "Design of Concrete Mixes" published by H.M.S.O. for D.S.I.R., price 6d., by post 7d., deals with the design of mixes and aggregates for road construction, but it gives more information than its predecessor about the method of combining various sizes of aggregates. The use of angular, coarse aggregate and natural sand in designing mixes is described. Examples are quoted to demonstrate the various methods of designing mixes.

The advantages of using aggregates of large maximum size and of allowing for absorbed water when determining the proportion of the mix are emphasised. Tables and graphs for use in the design of mixes are included in the publication.

GOOD, BAD OR INDIFFERENT?

By A. FOREMAN

No. 17

Preservation of Joinery

HAVE recently been inspecting some build-I ings erected about twenty years ago and I found signs of trouble due to dampness in the external joinery. Everybody knows that door frames and windows must be kept properly painted if serious deterioration is to avoided, but unfortunately this is not always carried out nor is it always appreciated that this leaves two serious sources at which

decay may start.

The first of these is the interval which may occur between the joinery being primed and receiving the final painting. Few paint manufacturers claim that a priming paint offers complete protection as priming is intended as a base for the other coats which together as a base for the other ceats which together provide the full protection. A priming paint offers some protection, particularly soon after it has been applied but this protection will not survive very long exposure to alternating rain and blazing sun.

The period of exposure of primed, but

otherwise unpainted, joinery should be as short as possible. This period may be re-duced if the door frames and windows are not fixed until the main structure is finished and the building approaching completion. If however more severe or prolonged exposure is inevitable the joinery should receive at least one undercoat as soon as possible after reaching

The other source of trouble is that the backs of the door frames and windows often do not receive any protection at all, other than the priming paint—sometimes not even that—and even the best priming paint is rendered ineffective by careless application. Those parts of the joinery in contact with the brickwork be subjected, at any rate at intervals, to relatively moist conditions. priming paint cannot be expected to act as an

effective barrier for 40 years or more.

It seems to me that, for the small cost involved, it is worth treating all external joinery with a preservative as the means of providing really long-term protection to the timber. The varieties of preservative are legion and are usually sold under trade names so it is difficult to give specific details of which to use, but some general comments may be helpful

As regards the efficiency of the preservatives most well-known brands can be relied upon and the makers will provide test reports or guarantee to support their claims. Where there is doubt, the Forest Products Research Laboratory at Princes Risborough, Bucks, or Timber Development Association will It is however necessary to find out the general characteristics of any preservative so as to know if it will be convenient to use it

so as to know it will be convenient to use it in any particular position.

The most effective way of applying the preservative is by treatment under pressure by which the preservative is forced into the timber throughout its thickness so that it makes no difference if the timber is subsequently cut to size and machined. Unfortun-ately, this method is rather expensive and may not be justified for joinery so that one has to resort to application, by brushing or dipping. These processes, if properly carried out, give protection to the surface layers of the timber but the protection is broken if the timber is subsequently cut or machined. therefore be applied to the finished joinery or possibly to the components after they have been machined but not assembled. This rules out any preservative of the water-solution types because you don't want to wet your timber after you have machined it. Even if the timber is treated under pressure before machining, you will have to season it again which means repeated kilning charges or con siderable delay. If however a preservative with an organic solvent is used, the solvent will evaporate and usually leave the timber unchanged as regards dimensions and shape. Greater protection can be given by dipping

the joinery than by brushing-on the preservative because by that method the preservative will penetrate right into the joints and crevices which are difficult to reach with brushing.

Care must be taken to select preservatives hich do not affect paint if this is to be the

ultimate treatment. This rules out creosote, for example, because it is virtually impossible to paint timber that has been treated with it Some preservatives do not require painting but most people seem to prefer the appearance of paint. Make sure also that the preservative will not affect the type of glue that is to be used. Do not forget that, except where impregnation has been used, the man on the job needs a small quantity of preservative to make good where the joinery has been cut during fixing.

You may think all these precautions are unnecessary but I suggest you examine some window sills or bay windows that have been exposed for 20 years or more and see if they are still sound, particularly at the junctions between the jambs and the sill. Even on doors I have found that the bottom of the stile has deteriorated so that it was difficult to fix a holt securely

Because of these dangers I have recently read that one American Association of Joinery manufacturers has agreed that all joinery shall be treated before despatch whether the pur-chaser asks for it or not. I think our own manufacturers might take a tip from them!

The same Association has also been investi-gating the use of "water repellants." These are applied at the same time as the preserva-tive but serve a different purpose. They reduce the rate at which timber picks up or loses moisture and thus reduce the rate at which it moisture and tims reduce the rate at which it swells and shrinks according to the humidity. It is claimed that considerable improvement can be achieved thus reducing one of the admitted drawbacks at present attached to exterior joinery. I understand that a few companies in this country are making experiments and, although they are still in an early stage, I think this is a development which will be well worth watching. After all, atteition to points like these makes an appreciable difference to the reputation of both the joinery manufacturer and the discriminating builder and may thus prove to be a good sound business

DOMESTIC FUEL APPLIANCES

By John Pinckheard

N Britain, stoves have never seriously rivalled open fires, in spite of their much higher thermal efficiency. Our deeply rooted attachment to the visual qualities of the open fire has been sufficient to outweigh the rela-tively low thermal efficiency and continual sacrifice of warmth associated with this type of appliance. In the past, abundant supplies of cheap fuel established the necessary basis for the universal adoption of open fires. To-day, with the need to use fuel more economic ally the superior efficiency of the stove is a factor of more obvious importance than formerly and it may be that in the future stoves will be more widely adopted.

There are two main types of stove closed and openable. Closed stoves operate only on coke or anthracite and have a higher thermal efficiency than openable ones

1. A free-standing openable stove with back flue outlet and hinged doors. This stove is installed in front of an old fireplace opening which has been bricked up.



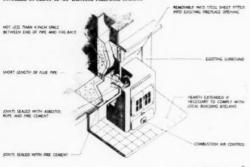
stoves, as developed since the war, burn a wide range of fuels including, of course, bituminous coal and are designed to operate with the doors either open or closed.

Openable stoves were developed in an

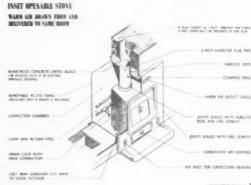
attempt to provide a popularly acceptable appliance which would burn coal more efficiently than an open fire. They are in effect a compromise between a closed stove with its high efficiency and an open fire with its visual stimulation. It must be admitted that with improvements in open fires the gap between the efficiency of an improved open fire and an openable stove is fairly narrow

The openable stove is fitted with doors The openable stove is fitted with doors which can be opened to give a clear view of the fire. During the day, doors may be open or closed: at night they are closed. Doors may be hinged (as in Fig. (1)), horizontally sliding (as in Figs. (3) and (5)), or vertically sliding, the action being assisted by a concealed balance weight. When the stove is open, sliding doors usually present a better appearance than hinged doors which reveal their soiled reverse sides; sliding doors are, however, more susceptible to mechanical

FREE-STANDING OPENABLE STOVE INSTALLED IN FRONT OF AN EXISTING FIREPLACE OPENING



 A free-standing stove of similar type to that in Fig. (1), installed in front of an existing fireplace opening. Courtesy of the Coal Utilisation Joint Council.



An inset stove with sliding doors. Air from the room enters the lower pierced openings and is returned heated through the upper openings.

defects. Doors are always provided with transparent panels usually of mica but sometimes of wire gauze.

Heat is emitted from the stove by radiation from its exposed hot surfaces and, when the doors are open, from the glowing fuel, by convection due to air becoming heated by contact with the hot surfaces and, where a back boiler is incorporated, as heat communicated to the water. The allocation of the total heat output between radiation convection and water heating varies considerably with different models.

There are two types of openable stove: freestanding and inset. A typical free-standing stove is illustrated in Fig. (1). Free-standing stoves are enclosed in cases with pierced openings to allow air to circulate in contact with the hot body of the stove. Flue outlets may be either at the top or at the back. Often alternative outlets are provided, with a cover plate for sealing the outlet not required. Typical inset stoves are illustrated in Figs. (3) and (5). These are not enclosed in cases, the convection space being provided by the brick and concrete recess in which the stove is placed. Both types of stove may have back boilers for supplying domestic water or serving radiators for additional space heating.

Performance

Minimum performance standards laid down by the Ministry of Fuel and Power are briefly as follows: For stoves with boilers. The stove to be capable

For stoves with boilers. The stove to be capable of being kept alight unattended for ten hours with a consumption of not more than 10 lbs. of fuel; the total thermal efficiency with doors open to be not less than 50 per cent. with coke and 45 per cent. with coal; the boiler efficiency with doors open, to be not less than 20 per cent. with coke and 15 per cent. with coal and, with doors closed, to be not less than 25 per cent, with coke and 20 per cent. with coal; the stove to be capable, with doors open, of a space heating output of at least 6,000 B.Th.U.s per hour with each of the fuels for which it is claimed to be suitable. For stoves without back boilers. The stove

For stones without back boilers. The stone should be capable of being kept alight unattended for ten hours with a consumption of not more than 7½ lbs. of fuel; the total thermal efficiency, with doors open, to be not less than 40 per cent. with coke and 35 per cent, with coal; the stone to be capable with doors open, of a space heating output of at least 9,000 B.Th.U.s per hour with each of the fuels for which it is claimed to be suitable.

Laboratory tests* tend to show that, contrary to the widely held view, thermal efficiency with most openable stoves falls somewha when the doors are closed. As room ventilation is, however, simultaneously reduced oue to the diminished effect of chimney pull the lower ventialtion losses have a compensating effect so far as the room temperature is concerned.

Openable stoves are designed to burn a wide range of fuels but particularly bituminous coal which is relatively more abundant. As may be inferred from the foregoing summary of the Ministry of Fuel minimum performance standards, somewhate higher efficiencies may be expected with coke. With coke, however, it is somewhat more difficult always to ensure continuous over-night burning.

Installation

Free-standing stoves are simpler to install than inset models and for this reason are more favoured in existing buildings where they are frequently installed in front of existing fire-place openings. Inset stoves need to be installed in a recess of brick or concrete of suitable dimensions and funless a surround is

*Domestic Boilers and Stoves Using Soild Fuel," by R. H. Rowse, and W. C. Moss, Journal of the Institute of Heating and Ventilating Engineers, April, 1950. incorporated with the stove as in Fig. (4), a properly designed surround must be provide f. For these reasons they are more often favoured for new buildings.

Free-standing stoves usually have back flue utlets and it is only necessary to make a connection to the brick flue by means of a short horizontal length of iron flue pipe. Whe a installed in front of an old fireplace (generally closed by sheet steel register plate) the inner end of the flue pipe should not be allowed to come closer than 4 in, to the back of the old fireplace. It is an advantage in such cases to turn the flue pipe up into the brick flue, using a right angle bend, a cap being fitted to the top of the flue pipe to prevent the entry of soot and mortar droppings. In the less frequent cases where such stoves are installed in recesses a top flue outlet model is generally more suitable.

It is difficult if not impossible to sweep the chimney through a stove with a back flue outlet and it is frequently necessary to remove the stove for this operation. There should be a soot door in the register plate, otherwise it will be necessary to remove the register plate in its entirety involving subsequent resealing.

(Continued on p. 26)



 An inset stove of the same type as that in Fig. (3). This model has a cast iron surround integral with the stove which simplifies installation.

Courtesy of the Coal Utilisation Joint Council.



3. An inset stove with sliding doors.



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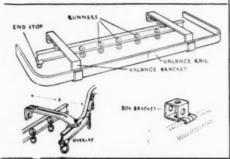




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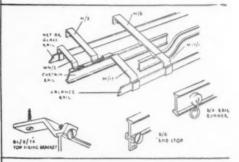


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COSTING OF BUILDING WORK

by S. Howard Withey, F.Comm.A., etc.

THE directors of a building and contracting company in the North recently issued 15,000 cumulative preference £1 shares at par, carrying a fixed dividend of 5 per cent. per annum, and the entire proceeds were expended in acquiring new and additional building plant for use in the carrying out of a number of important contracts. The company's ordinary shares entitled the holders to an unlimited proportion of the profits after meeting prior charges, while the preference shares gave the right to any dividends that might fall in arrear, such arrears to be carried forward until paid off. Having regard to the nature and extent of the operations to be undertaken it was decided to include interest at 5 per cent in the cost and contract accounts and to distribute the capital expenditure involved in the installation of the special plant over a period of six years in the form of equal annual instalments, the difficulty of determining the precise amount to be written off each year being overcome by referring to a table of which the following is an extract:

Years	3 %	4 %	5 %
4	 -2690	-2755	- 2820
5	 -2184	. 2246	.2310
6	 1846	1908	1970
7	 1605	. 1666	1728
8	 -1425	-1485	. 1547
9	 -1284	-1345	-1407
10	 -1172	·1233	1295
11	 -1081	.1141	1204
12	 -1005	· 1066	.1128
13	 - 0940	-1001	1065
14	 .0885	.0947	· 1010
15	 .0838	.0899	-0963
16	 .0796	-0858	.0923
17	 .0760	-0822	.0887
18	 .0727	.0790	-0855
19	 .0698	.0761	.0827
20	 -0672	0736	-0802

The above table gives the decimals required to extinguish £1 over periods ranging from four to 20 years after adding aircreast at varying rates, and the figure to be incorporated in the costings was arrived at by multiplying the decimal 1970 by 15,000, giving £2,955. This amount will accordingly be recorded on the credit site of the plant account each year and transferred to profit and loss, and at the end of the period of six years the asset account will show the following entries:

BUILDING PLANT ACCOUNT

Debit.		
Jan. 1. To Capital Cost Dec. 31. To 5% Interest		15,000 750
		£15,750
1950 Jan. 1. To Balance forward Dec. 31. To 5% Interest	• •	12,795 640 £13,435
1951 Jan. I. To Balance forward Dec. 31. To 5% Interest		10,480 524
		£11,004

Jan. 1. To Balance forward Dec. 31. To 5% Interest		£ 8,049 402
		£8,451
1953 Jan. 1. To Balance forward Dec. 31. To 5% Interest	0 0	5,496 274
		£5,770
Jan. 1. To Balance forward Dec. 31. To 5 % Interest	• •	2,815 140
		£2,955
Credit		
Dec. 31. By Amount written off Dec. 31. By Balance forward		£ 2,955 . 12,795
		£15,750
Dec. 31. By Amount written off Dec. 31. By Balance forward	• •	2,955 10,480
		£13,435
1951 Dec. 31. By Amount written off Dec. 31. By Balance forward		2,955 8,049
		£11,004
1952 Dec. 31. By Amount written off		2.955
Dec. 31. By Balance forward		5,496
1953		£8,45·
Dec. 31. By Amount written off		2,955
Dec. 31. By Balance forward	0.0	2,815
1954		£5,770
Dec. 31. By Amount written off		2,955
		£2,955

While the sum of £2,955 will be included in each year's costings, making a total of £17,730 for the period covered by the allocations, the company's profit and loss account will be credited with a total of £2,730, made up as follows:

		五
1949	0.0	750
1950	0.0	640
1951	0.0	524
1952		402
1953		274
1954	0.0	140
Inter	£2,730	

To ignore interest on capital in the assessment and recording of plant depreciation may easily lead to a state of affairs in which the margin of profit actually realised in the fulfillment of building work is insufficient by reason of faulty estimates and quotations, and this in turn might cause a serious shortage of funds and reserves for essential re-equipment. Failure to provide for interest retracts from the practical value of the costing data, and in all cases where funds are raised for the specific purpose of operating additional equipment it is advisable to include interest in the costings.

I N addition to the regular services of a timekeeping officer at headquarters, the majority of builders and contractors find it necessary to employ a timekeeper on all jobs that involve the services of a dozen or more operatives, and the duties of the timekeeper may range from the reading of the tally board at the appointed time to the posting of the workmen's time from the Starting-Finishing Time Book.

When the tallies are given out, fresh names may have to be added and the wages clerk advised accordingly. The time returned by charge hands on the daily sheets is usually approved in consultation with the foreman's clerk and any discrepancies systematically cleared up, and all claims for back money should be carefully examined before the entries are made on the current week's wages sheet. The timekeeper will be present at the end of the week when the pay packets are given out, and all medical certificates covering absence from work due to illness will be needed at headquarters. Reports of accidents should be signed by the foreman and forwarded to the cashier without delay, and the weekly work sheets should show the number of times the first aid box has been used.

Unless a contract is large enough to involve the services of an agent or qualified civil engineer, the foreman will be entrusted with wide powers and will have to deal with a maze of regulations. He will have to administer the job so that it returns a profit for his employer and also satisfy the client whose requirements are expressed in the contract documents. He must carry out the policy of the head office, and will be responsible for recording a history of the job, the starting, finishing and intermediate break times of the operatives being entered in a book which has been provided with columns for the insertion of the check numbers, the names of the employees and the days of the week. The actual number of hours worked by each man daily will be shown in the site wages books from where the essential details should be recorded on a return to be forwarded to the head office. The Starting-Finishing Time Book should be of convenient size such as 14 ins. by 8 ins., and a typical pattern is indicated on the following page.

If the wages are divided into piece work and day work, the cards will usually pass through the progress office for the purpose of allocation; in some cases an analysis under such heading: as plumbers, joiners and carpenters, painters, etc., will be necessary, but in other cases the wages will have to be dissected to show the amounts paid out to woodworkers, breakers, repair workers, machine operatives, etc., and when the analytical work has been checked the wages sheets can be prepared.

Entries on wages sheets usually comprise the numbers, names and rates of pay of each man, the back money (if any), the job debits and job credits, and the insurance and other deductions, all of which should correspond with the foreman's daily time records. The headings under which the weekly totals are classified should correspond, as nearly as possible, with the headings under which the materials are being analysed in the purchases book or goods inwards journal: for example, the left-hand pages of the wages book may have a column for the numbers, one for the names, another for the hours worked during the week, a column for the rates of pay, several columns for the various deductions, one for the nesums paid.

STARTING-FINISHING TIME BOOK

Check Names of		Saturday		Sunday		Monday		Tuesday		Wednes.		. Thursday		Friday	
Nos.	Employees	S.	F.	S.	E.	S.	F.	S.	F.	S.	F.	S.	F.	S.	F.
				-	_	-	-		-						
			-	-		-				-		-			

out, and a section for the employer's contributions, while the right-hand side may comprise columns for the job debits, job credits, brickwork, joinery, slating, glazing, electrical work, covering and insulating, etc. The cost of tool-making should be shown separately as this may have to be charged to capital account. The work performed by each assistant in the preparation of the wages should be signed for, and each operative should be present at the paying out, special arrangements being made for those who, through illness or other causes, cannot possibly attend. A good general style of ruling for the wages book is given below.

As payments made on building sites are now of a varied nature, my next article will discuss methods of recording and classifying petty cash expenditure and will include a typical book ruling.

WAGES BOOK

E _d s. d. E s. d.	Nos.	Names	Hours	Rates	Gross Wages	Deductions	Net Wages	Employer's Contributions
					£įs.d.		£ s. d.	
					1			

RIGHT-HAND SIDE

Job Job Debits Credits Carpenters Brickworkers Plumbers Painters Tool-makers				Brickworkers	Plumbers	Painters	Tool-makers	&c.
--	--	--	--	--------------	----------	----------	-------------	-----

(Continued from p. 24)

of all the joints. Where free-standing stoves are installed in new buildings (or even in existing ones where some additional builders' work is permissible), a conveniently placed soot door can generally be arranged, either alongside the stove or accessible from an adjoining room or outside the house, which enables the chimney to be swept without the inconvenience of removing the stove and subsequent resealing of the joints at the flue outlet.

When stoves are placed in front of existing fireplace openings care should be taken that the local building byelaws are not contravened and it may be necessary to extend the hearth forward. This can sometimes be done by laying a new slab hearth on top of the old one (if it is a flush one) and projecting forward over the floor. In the L.C.C. area

the relevant construction byelaw is No. 132 (7) (a)†.

With inset stoves the installation problems are much akin to those of convector open fires. It is of paramount importance to ensure that flue connections are absolutely artight, otherwise there may be leakage of smoke into the convection space or alternatively loss of heat by warm air being pulled into the flue. All joints around the surround and at other points affecting the convection chamber should be properly sealed. Warmed air may be ducted to upper floor rooms or returned to the same room in which the stove is installed. Where the inset stove is the sole heating appliance in the room grilles should always be provided so that warm air can be returned to the same room (as in Fig. (3)), otherwise it may be difficult during spells of severe wealther to maintain the desired room temperature without overheating the stove.

† "Construction of Buildings in London," L.C.C. 1948,

INTEREST *

THE HOUSING SUMMARY presented to Parliament on December 29, as a White Paper jointly by the Minister of Health and the Sceretary of State for Scotland, shows that the number of permanent houses completed in Great Britain during November was 17,453, compared with 17,603 in October.

This brings the number of permanent houses completed during the year to date to 182,221,

made up	-3	5	TOHOWS:			
January			14,356	July		17,013
February			14,069	August		14,945
March			19,385	Septemb	100	17,398
April	٠		14,862	October		17,603
May		,	17,030	Novemb	эег	17,453
June			18,107			

The total number of houses completed under the post-war programme is now 962,714 (805,568 permanent and 157,146 temporary).

During November homes were provided by new building, repair of uninhabitable houses and conversion for 18,285 families, compared with 18,563 in October, and 18,068 in September. This brings the total number of families rehoused by these methods under the post-war programme to 1,244,198. This total does not include homes provided in service camps or requisitioned houses.

THE PRICE OF VIRGIN ALUMINIUM in ingot form is increased from £120 to £124 per long ton delivered into consumers' works, as from January 1. For metal in notch bar form there will be an addition of £2 10s, a ton as at present.

The new price will apply to metal of a purity of 99 % to 99 · 5 % inclusive. There will be no change in the premiums to be paid for higher purities.

MAXIMUM PRICES of bright bolts and nuts, set screws, studs and washers have been increased under a new Order made by the Minister of Supply, which came into operation from Monday, January I. The Order—the Control of Bolts, Nuts, etc.

The Order—the Control of Bolts, Nuts, etc. (No. 2) Order, 1950—also increases the minimum amounts eligible for carriage paid delivery. Copies are obtainable from H.M. Stationery Office or through any bookseller.

SITE INVESTIGATIONS are the subject of Civil Engineering Code of Practice No. 1: 1950 which is now available from the Institution of Civil Engineers, Great George Street, Westminster, S.W.I., price 10s.

NEW PRESIDENT of the Institution of Sanitary Engineers is Mr. W. Fillingham Brown who is Chief Engineer and General Manager of the Colne Valley Sewerage Board, a member of the Institution of Civil Engineers, and of the Institute of Sewage Purification.

INCREASES IN SALARY recommended for the County Architect and the County Surveyor of the West Riding County Council are to be resisted. The present salaries are £2,400 and £2,100 respectively. Under the recommendations of the Joint Negotiating Committee these salaries would have been raised to £4,000.

METAL SHORTAGES in the New Year may increase the demand for alternative methods of providing protective coatings. Shortages of zinc in particular are likely to reduce the amount available for galvanizing, etc. The Ministry of Supply have recently issued approach for modified ferrous phosphating processes which do not require zinc or manganese. Particulars can be supplied on request.

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work. (b) address for application. Where no town is stated in the

CONTRACT • NEWS •

address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked * are given in the advertisement section.

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OPEN

BUILDING

BEDDINGTON AND WALLINGTON R.C. (a) 12 flats, Abinger Close, Wallington. (b) Borough Engineer, Town Hall, Wallington. (d) Jan. 8.

*BRADFORD E.C. (a) Junior School, Eccleshill. (b) City Architect, Town Hall. (c) 2 Gns. (e) Jan. 29. See page 27.

GOSPORT B.C. (a) 89 houses, Rowner Estate. (b) Borough Engineer, Town Hall. (c) 2 Gns. (e) Jan. 24.

NORTHAMPTONSHIRE C.C. (a) Technical Institute, Kettering. Extensions to Tennyson Road School, Rushden. Infants' School, Corby. (b) County Architect, County Hall, Northampton. (d) Jan. 10.

*NORFOLK E.C. (a) Playing field and tennis court, Kings Lynn Girls' High School. (b) F. Lincoln Ralphs, Chief Education Officer, County Education Offices, Stracey Road, Norwich. (d) Jan. 13. (e) Jan. 30 noon. See page 27.

READING B.C. (a) 60 flats, Gosbrook Road, Caversham. (b) Borough Architect, Town Hall. (d) Jan. 20,

RUISLIP-NORTHWOOD U.C. (a) 48 flats, etc., Southeite Rise site. (b) Engineer and Surveyor, Council Offices, Oaklands Gate, Northwood. (c) 2 Gns. (e) Feb. 1.

STREET U.C. (a) 22 houses, Portland site. (b) N.H.A. Darby, Westminster Bank Chambers, Fore Street, Taunton. (c) 2 Gns. (e) Jan. 26.

SWANSEA B.C. (a) Primary School, West Penlan. (b) Borough Architect, The Guildhall. (c) £5. (e) Feb. 7.

WELLINGBOROUGH U.C. (a) 76 houses, Croyland Hall Farm Estate. (b) Engineer and Surveyor, Council Houses. (c) 2 Gns. (d) Jan. 15.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work. (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

BUILDING

BEDFORDSHIRE. M.o.W. (1) 6 pairs of Staff houses. (2) College of Aeronautics, Cranfield. (3) Y. J. Lovell & Son Ltd., Marsham Lane, Gerrards Cross, Bucks.

CHESHIRE. WAR DEPT. (1) Misc. work, (3) H. Hampson, Chester.

CUMBERLAND, WAR DEPT. (1) Bldg. work. (3) Tate & Holmes Ltd., Newcastle-on-Tyne.

DEVONSHIRE. M.o.W. (1) Erection of H.O.R.S.A. Hut. (2) Tiverton Council School. (3) Stephen & Son (1941) Ltd., Okehampton Street, Exeter.



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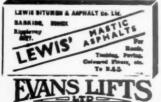
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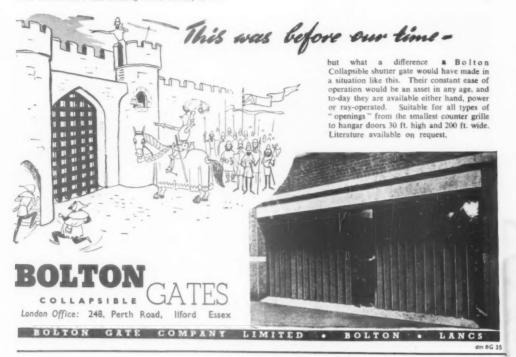
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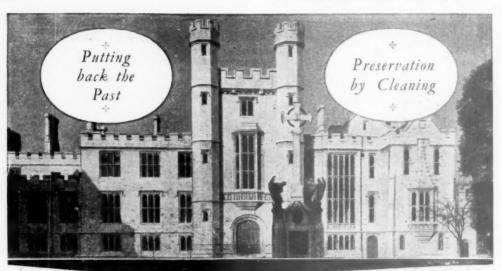
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office experience.

The appointments will be subject to the provisions of the Local Government Superanusation Act, 1937, and the successful applications will be required.

No assistance can be given in the prevision of housing accommodation, and the prevision of housing accommodation, Application Form may be obtained from the City Architect. Town Hall, Bradford, and the completed form must be returned to me not later than the 13th January, 1951.

W. B. LEATHEM, Long. Conf.

W. H. LEATHEM. Town Clerk Town Hall, Bradford, 15106

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ent to the permanent stall on the occurrence wacanacies. Successful candidates will be required to assau the design, layout and preparation of working awains for bousing softeness cootages and must-occy flats) and will be employed in the Housing ferties. Division.

Fortias of application may be obtained from the Director of Housing. The County Hair, Westimater Bridge, S.E.1 (sampled addreased envelope required and quote reference A.A.1). Canassising disquainties, (816).

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Applicants should have a sound knowledge of repairs to property, general maintenance, builders specifications, small reconstructures of displace ones and building prices, and mustore displace ones and building prices, and mustore and members of a recognised professional institute and have at least 5 years' experience in addition to technical training.

Applications, stating, in the following order, age, present position and saiary, previous positions and full details of qualifications and experience, accompanied by copies of not more than three recent position and the property of the didate in sec recurring housing accommodation, TREVOR T. JONES, Town Cierk. [5124

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The appointment is subject to passing a medical examination, and to one month's notice in writing

cxamination, and to one month's notice in writine on either side.

Applications, stating age, qualifications and experience, together with copy of a recent testimonia, and the names and addresses of two persons to whom reference can be made, should be sent to the undersigned on or before Tuesday, 16th January, 1951.

Canvassing in any form is prohibited. Relationship to any member or sensor officer of the Council must be stated in the application.

CHARLES H. BLAKEWAY, M. Ints. Mun. E., Borough Engineer and Surveyor, Newnham House,

Newnham House, Horne Lane, Bedford, 19th December, 1950,

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appointment.
Applications, stating age and qualifications, with full details of experience, together with copies of recent testimonals, should be loided with the Harbour Engineer, 15 Regent Quay, Aberdeen, not later than 31st January, 1951.
Harbour Engineer's Office, Aberdeen.
30th December, 1960.

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its equivalent at one of the recognised schools of architecture. The appointment, which will be terminable by one month's notice on either side, is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications, giving age, apperience, etc., accommonate, should be addressed to the undersigned, endorsed "Architectural Assistant" in after than 10 a.m on Friday, 19th January, 1951.

It will be necessary for the successful candidate to provide his own housing accommodation as the Council is not in a position to assist.

Canvassing, directly or indirectly, will be deemed a disqualification.

disqualification

(S.gned) R. S. FORSTER, Town Clerk. Town Hall, Dyne Road, Kilburn, N.W.6, 21st December, 1950. 15118

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[3119]

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Westminster City Hall.
Charing Cross Road, W.C.2. [5123]

SODBURY RURAL DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

A PPLICATIONS are invited from Registered Architects for the above appointment at a sal-ary in accordance with Grade V. A.P.T. Division of the National Scale of Salaries (65:20-6570). The appointment will be subject to the provisions of the Local Government Act. 1937, and to one month's notice on either side.

The person appointed will be required to carry out architectural duties in connection with housing

out architectural duties in connection with housing schemes and other works.

The Council will assist the successful candidate in obtaining suitable housing accommodation.

Further information and conditions of appointment may be obtained from the understanded and applications, endorsed "Appointment of Architectural Assistant," must be received not later than 20th January, 1951.

F. R. APPLEBY, Clerk to the Council Council Offices,
Chipping Soddury, Near Brasol.

Chipping Sodbury, Near Bristol. 2nd January, 1951,

A9CHITECTURAL APPOINTMENTS VACANT

A RCHITECTURAL Amistants, qualified or Intermediate, required for varied work in private Architect's London office.—Box 7757, The Architect and Building News

A SSISIANT required for Architect's Office in London (Citty), preferably of Inter-R.1.8.A standard. Hours 9 to 5. Must be keen.—Write staling experience, etc., to Box 7775, The Architect and Building News.

and Building News. [5112]

MPORTANT Manufacturing Firm has a vacanity in its Engineering Department for an Industrial Architect with some Civil Engineering experience. The successful applicant will be expected to accept the superstanding or building maintenance, minor building the superstanding of building maintenance, minor building the superstanding of the superstanding to the super

NAIROBI, KENYA. Vacancies now exist for experienced applicants:—
(a) SENIOR ASSISTANT ARCHITECT, £750 x £100 - £950 p.a., plus bonus, aged 35 to 40.

£100 - £950 n.a., prus source.

Ref.: OSS/15/1,

(b) ARCHITECTURAL DRAUGHTSMAN, initial salary £49 n.a. Ref. OSS/10/2,

Fare out on repayment, free return fare or bonus on satisfactory conclusion of 3 years' service. Preference single men, prepared fly out.—Write giving Service. Architects Service, 5, to Overseas Welldon Crescent, Harrow.

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Tenders must be returned to reach the under-

Tenders must be returned to reach the undersigned, not later than Monday, the 29th January. 1951, in the official envelope provided.

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lowest or any tender.
LINCOLN RALPHS, Chief Education Officer.

County Education Offices, Stracey Road, Norwich, January, 1951. 15128

COMPETITION

ARCHITECTURAL COMPETITION.

A FESTIVAL HALL AT HESWALL FOR THE WIRRAL URBAN DISTRICT COUNCIL.

THE Waral Urban District Council invite Architects to submit designs in Competition for a Festival Hall to be erected at Heswall, Wirral.

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WM. F. ROBERTS,
Clerk of the Council.
Council Offices, Heswall, Wirral, Cheshire.
Deposit: £2 2a, 0d. [5115

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